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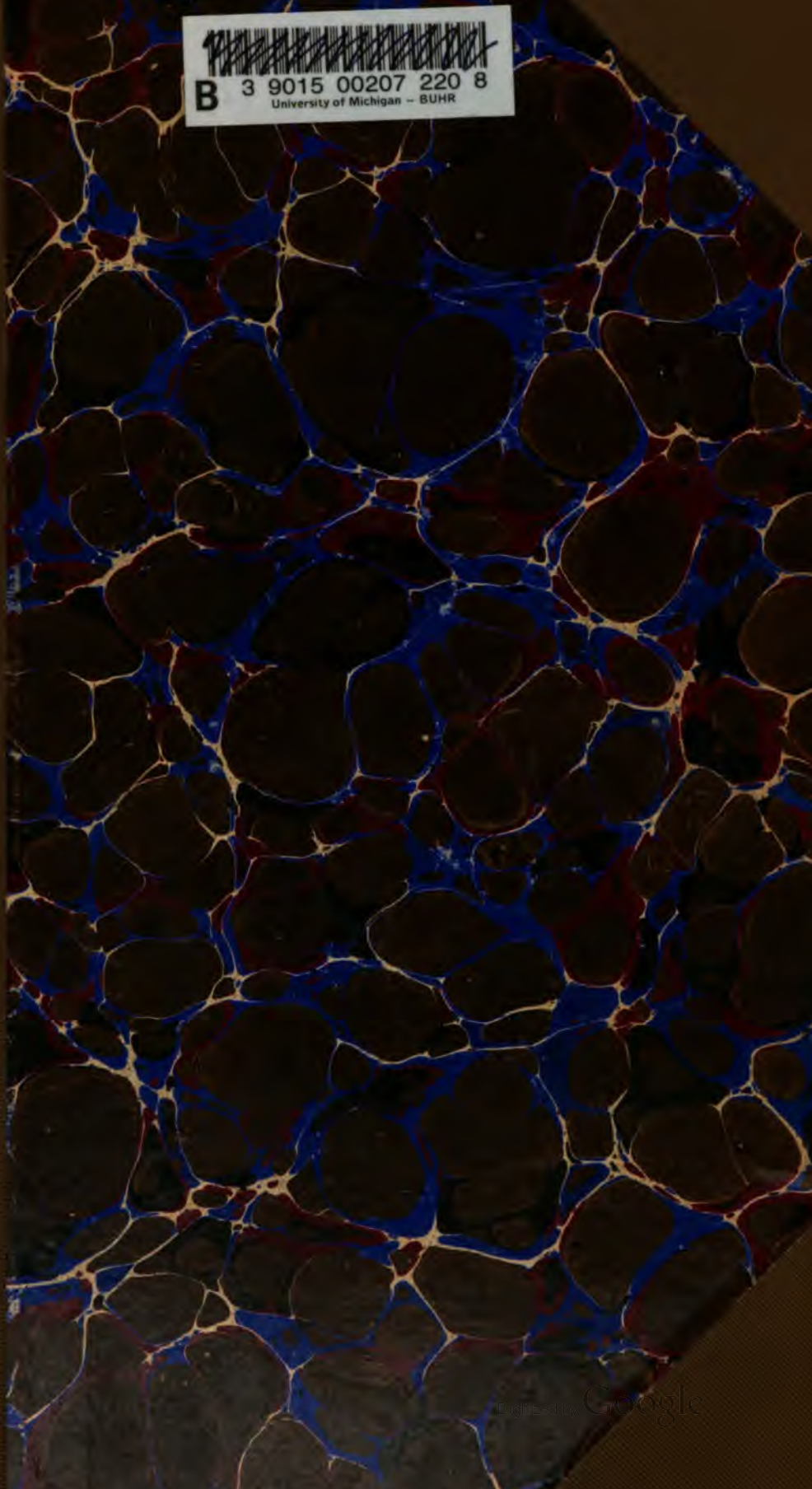
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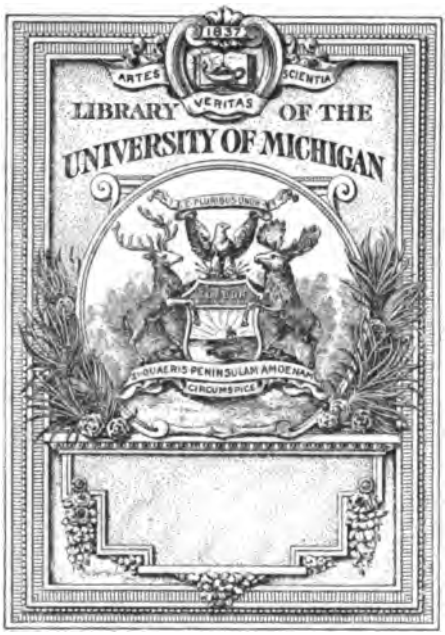


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EDITORS:

ADAM H. WRIGHT, B.A., M.D. W. H. B. AIKINS, M.D.

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# The Canadian Practitioner and Review.

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## Original Communications.

### REPORT OF A CASE OF ACUTE RHEUMATISM.*


BY HAROLD C. PARSONS, M.D., TORONTO.


Miss McB., aged 44 years; the family history showed one brother died of tuberculosis at 27 years; a sister of appendicitis; the father of tuberculosis; the mother of nervous trouble. Regarding the personal history, the patient has had typhoid fever, diphtheria, mumps (at 24 years) and pneumonia. Had uterine myoma removed four years ago. Six years ago, after severe mental shock, began to have dizzy fits, buzzing in the ears, attacks of unconsciousness, with falling (several daily), progressive loss of hearing, vomiting; thought it Meniere's disease; controlled by bromide. The present illness began November 25th, 1902, with acute tonsillitis and pharyngitis; throat very sore and red, not much swelling, but pain along the sterno-mastoid muscles; swallowing painful. Temperature 103 degrees F.; pulse, 120; tongue very coated; breath foul. Sodium salicylate and hydrogen dioxide spray prescribed. On November 27th temperature was 101 degrees F.; pulse. 100; pain on swallowing, with pain down the neck. November 29th, much improved. Throat, red; not sore; irritable cough. November 30th, over right patellar tendon is an area 2½ by 2 inches slightly raised, bright red and very tender. No swelling of joint; no pain in movement of joint except when above area is stretched. December 1st, about the area there were several smaller ones at sides of the knee, some slightly raised, others flat, all highly hyperemic. They vary from 0.5 to 2½ to 3 c.m. in diameter, all very tender; can be pinched up, but this is very painful. The edges of some are raised, but the rise is gradual. The patches are any and every shape, round, oval, but mostly irregular in outline. Temperature, 100 degrees F.; pulse, 88. The same condition is seen on left knee, a large patch over the patellar tendon, and smaller

*Read before Toronto Clinical Society, Dec. 2nd, 1902.




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ones, twelve to fourteen, over sides of the joint. Down the shins, on both sides, is a line of similar spots, mostly raised and very tender. They tend to run together into a line. There are a few scattered spots on the inner and outer sides of the legs; none posteriorly. Similar lesions have appeared along line of tendons over front of ankles, painful to touch, but not on movement. They are also over the metatarso-phalangeal joints, very painful to touch, but not on movement of joints. There is marked redness over both malleoli, both sides, and very tender. Twenty-four hours later there was swelling and redness below the malleoli, and later pain on movement of the ankle joints. The heels are also very tender. About the same time there was a strikingly symmetrical eruption above both knees on the front of the thighs and sides of the lower thirds of the thighs of similar area; some flat, some raised, and from 1 to 2 c.m. in diameter. Several are 3 c.m., quite raised and coming to a point, very tender, but at no time any fluctuation or suppuration, vesicles or pustules. Each lesion lasted four to seven days. The pain lasted three or four days, and the spots gradually faded, leaving a faint yellow discoloration for a day or so longer, and the raised ones a wrinkled surface. On December 2nd there was pain in the left side, cough, and pain on deep inspiration. Pleural friction was heard in mid-axillary line. All subsided in two days. There was no effusion to be found. The mental condition was very strange, very dull and drowsy, and when aroused very emotional; frequent wanderings and marked tremor of the hands. The eyes were rolled up; no squint; no focal signs. This continued until December 7th, the mind clearing somewhat by that time. Temperature, 98 to 99.5; pulse, 88; the heart and lungs clear. That day the patient complained of pain in the epigastrium, but an examination revealed no tenderness, no rigidity, no tympanites. Early on the morning of the 8th of December the patient complained of severe pain in the right iliac fossa. The nurse noticed some distension. Temperature, 100 degrees F. at 11 a.m.; pulse, 99. The abdomen was slightly distended, resonant. The abdominal respiratory movements were lessened; no visible peristalsis. The whole right side of the abdomen was rigid and hard; left much less so. The right side was very tender, and also over the appendix. The left side could be palpated freely, but deep pressure here caused pain on the right side. The liver and spleen were not enlarged, vaginal and rectal examination was negative. The tongue was coated, but not more so than previously. Mr. Cameron saw the patient with Dr. Parsons that afternoon. All the signs lessened in two days. During this time, December 5th and 6th, on the palms, and base of fourth finger, both sides, there was an area of irregular red-

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ness, not over the joints but more towards the wrists, not painful but exceedingly tender on pressure; no pain on movement; gradually subsiding in two to four days. Much the same condition on plantar surfaces of both feet at the metatarso-phalangeal joints. The elbows show a few flat erythematous patches about the joints and along the crests of the ulnæ. The joints are alright. The symmetry is striking. December 9th, the nurse reports increase of the mental signs; very restless; constant, low, muttering delirium; patient tore the bandages from the legs. December 10th, there were some involuntary evacuations of the urine and feces. Temperature, 101 degrees F.; pulse, 88. Heart and lungs clear; the abdomen soft and normal. Skin lesions on the proximal phalanx of fourth finger and adjacent side of little finger. From the 9th to the 15th the patient was quite unconscious. On the 15th Dr. Fotheringham saw the patient. The temperature had reached 101 degrees F.; pulse, 80-88 The face was drawn slightly to the left; convergent squint in right eye; flexor rigidity general, but most marked in left arm. All reflexes were normal and there was no ankle clonus; meningitis or some cerebral lesion present. The patient was conscious again on December 15th. On December 16th the patient complained of pain under both jaws. Both submaxillary regions were swollen, indurated and tender; no fluctuation. On December 19th the temperature was 102 degrees F., and swallowing was very difficult; breath foul; breathing labored; again unconscious—perfect stupor. The jaws were rigid; could not examine the throat. Fearing edema of the glottis or retropharyngeal abscess, Dr. Parsons had Dr. Wishart on the 19th examine the patient under chloroform, but the examination was negative. On December 20th the temperature was 99 to 101.8 degrees F.; pulse, 64; fed by bowel. By December 27th the mental condition had cleared up; temperature lowered. By December 31st the patient was normal and recovery was continuous but gradual.

The following points in this case were noted by Dr. Parsons: Pharyngitis, erythema nodosum, arthritis and periarthritis, pleurisy, peritonitis, meningitis (unconscious nine days), angina Ludovici; all non-suppurative. Rheumatic affections of throat are recognized; erythema nodosum (rheumatic), arthritis and periarthritis (rheumatic), pericarditis, a frequent complication; endocarditis, joint surfaces, etc.—why not by analogy, pleura, peritoneum and meninges?—and all were non-suppurative. Question: Septic; rheumatic? Urinalysis on December 3rd showed that the urine was cloudy, amber, acid, sp. gr. 1015; albumin (a trace), squamous epithelium and hyaline casts. On December 7th it was the same, and again, on December 10th, same; uric acid and a few hyaline casts.

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# SYMPTOMS OF ACUTE RHEUMATISM.*

By W. P. CAVEN, M.D., Toronto.

In view of the great differences in the manifestations of rheumatism as ordinarily seen in adults, and those occurring in children, I have thought it best to describe them separately. In the first place I will describe the symptoms as met with in adults.

1. Rheumatism in the Adult.—Rheumatic fever has no definite incubation period. The onset of rheumatism is usually gradual and is preceded in a great many cases by a few days of malaise, sore throat and irregular pains in the limbs and joints. Rarely, however, the characteristic acute symptoms may set in very abruptly. At the onset chilliness is often met with, but well marked rigors are not frequent, and when they do occur there are generally several of them. There is seldom headache. The appearance of the tongue is somewhat characteristic, being flabby, teeth marked and covered with a white fur. Twenty-four hours after the onset the disease is usually fully developed, the marked features being pyrexia, pain and joint affections, the condition of the skin and of the urine.

(*a*) *As to the Pyrexia.*—The temperature is in most cases severe in proportion to the number of joints affected, yet as Fagge says, "Even Wunderlich was unable to recognize any typical course" beyond the fact that it is usually highest in the evening (except in cases of hyperpyrexia). The highest temperature is reached early in the disease—from the second to the fourth day—and rarely exceeds 104 F. Under treatment, as a rule, it rapidly falls. The pulse is often very rapid, large, full and bounding, and sometimes dicrotic.

(*b*) *Pains and Joint Affections.*—Pain usually commences in one of the larger joints—knees, shoulders, ankles, wrists and hands—and rapidly becomes very severe. When in pain the joints are kept in characteristic positions; the knees slightly flexed, the ankles extended, the elbows flexed, the wrists extended, and fingers of the hand slightly turned towards the under side. The joints are swollen, hot and reddish as well as acutely painful. One of the most characteristic features of acute rheumatism is the suddenness with which the joint affection clears up in one joint and flies to another. One day a joint may be extremely painful, swollen and hot, and the next be free from pain and present an almost normal appearance. The swelling around the joint differs from that of gout inasmuch as it does not pit on pressure, nor does desquamation of the epi-

* Read before Toronto Clinical Society, Dec., 1902.

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dermis occur, nor are the surrounding veins dilated. Extensive joint effusion is rare and much of the enlargement is due to the periarticular tissues being infiltrated.

(*c*) *Conditions of the Skin.*—Profuse sweating is one of the marked symptoms of acute rheumatism. Stress is often laid on the sour smell and acid reaction as a diagnostic point in acute rheumatism. However, one meets with exactly the same smell in persons in perfect health who do not change their underclothing after free sweating; and as to the acid reaction, different parts of the skin, in the same person, may be shown to present an acid, alkaline and neutral reaction to litmus paper. Associated with the sweating we often find a copious eruption of sudamina; this may, of course, be met with in any febrile state accompanied by sweating. The vesicles are at first clear and transparent, then their contents become milky and their bases slightly inflamed and reddened.

(*d*) *Condition of the Urine.*—Careful research into the condition of the urine has thrown no light on the cause of the disease; it presents the same features as in other fever conditions. It is reduced in quantity owing to the free sweating; it is of higher specific gravity—1020 to 1030—of high color from the large quantity of hematoporphyrin and small quantity of urobilin. It is very acid in reaction; clear when first passed; deposits abundant urates when cooled, and, usually, some uric acid crystals.

(*e*) *Conditions of the Blood.*—Anemia is often a marked symptom; it is associated with some leucocytosis. Fibrin is greatly increased, more so than in any disease except pneumonia, but coagulation is slower than usual; red cells may be diminished 1,000,000 to 2,000,000; hemoglobin is especially diminished; changes in form of cells are usually slight. The degree of leucocytosis varies with the severity of the case. Polynuclears are absolutely increased, lymphocytes (mononuclears—*Cabot*) absolutely diminished.

2. Symptoms as Met With in Childhood.—Here we meet with marked differences in symptoms from those seen in the adult—prominent among which differences are the slight articular manifestations and the absence of the profuse acid perspirations. The onset in children is very frequently marked by an attack of tonsillitis. The tonsillitis is seldom of great severity and a suppurative rheumatic tonsillitis in children is exceedingly rare. There is nothing distinctive in the clinical appearance of rheumatic tonsillitis, and cases can only be pronounced rheumatic when other evidences of rheumatism are present.

(*a*) *Pyrexia.*—This is a much less conspicuous symptom in children than in adults. In contrast with what occurs in other complaints, in rheumatism, the younger the child the less the

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tendency for the temperature to be raised. In ordinary cases without complications, as pericarditis or chorea, the temperature seldom ranges above 101 F. I will refer here to an interesting clinical fact, that in children who have sustained a sharp attack of rheumatism with considerable degree of pyrexia, the temperature may be persistently raised at some period of the day for months; it being known to reach even as high as 104 F. without any injurious effects on the child.

(*b*) *Pain and Joint Affections.*—Pain is almost invariably present at some time or another in every attack. Often it is the only symptom complained of, but it seldom is as severe as in adults. It cannot be too carefully remembered that in the vast majority of cases the so-called "growing pains" of children are rheumatic. Physiological growth is a painless process, and growing pains are undoubtedly pathological. We all know how common it is to find endocarditis in children, often producing mitral stenosis, where the only symptom of rheumatism has been these growing pains. The joint affections in children are, as a rule, severe and more transient than in adults. The knees, ankles and wrists are the joints most often attacked; when the smaller joints are attacked the case is usually a severe one. The flitting character of the joint affection is one of the features in the child as well as in the adult. Although the joint affection in children is usually of a minor degree, yet we must not forget that some degree of arthritis or pains in the joints is a feature in by far the greater number of cases.

(*c*) *Condition of the Skin.*—The skin in children is, as a rule, hot and dry, differing in this respect from that of adults. Rheumatic children, however, are very prone to sweating on slight exertion in the intervals between attacks. I will here refer to the occurrence of subcutaneous fibrous nodules attached to the tendons and fascia. They are much more commonly seen in children than in adults, and Cheadle has shown their close association with severe endocarditis. In size they vary from a pin's head to a large pea, and are most numerous on the fingers, hands and wrists, but also occur about the elbows, knees and spines of the vertebræ and scapule. In children they are mostly found on the backs of the elbows and over the malleoli. They are not tender. Histologically the structure of the nodule is similar to that of the nodular growths on the cardiac valves. (Futcher worked these out.—*J. H. Bulletin.*)

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# COMPLICATIONS OF RHEUMATISM.*

By JOHN L. DAVISON, M.D., Toronto.

Perhaps the most important complication of acute articular rheumatism is endocarditis. The cause of the lesion is due, no doubt, to either a dissolved toxin or a very abundant infective agent in the blood. This irritant affects chiefly connective tissue membranes, and especially such as are exposed to friction. For we see the endocardium affected exactly where the surfaces come into contact. It seems to require the mechanical effect of friction, added to the toxin, to produce the inflammation.

Of course, in every case of acute articular rheumatism the medical attendant watches daily for symptoms of this very serious complication. May I add a word of warning as to those cases in which the symptoms of rheumatism—so well given just now by my friend, Dr. Caven—are masked, where the disease is so apparently light as to its usual manifestations, that the patient is not put to bed, and may even be following his usual avocation. I think I have seen hearts left weak for the remainder of the span of life through neglect of careful examination for this grave lesion, in cases where the pain and disability were so slight as to allow the sufferer to take baneful exercise. Especially is this liable to happen in young subjects.

The pathology of the disease has been taken up by Dr. Anderson, but whatever be the *materies morbi* which produce the lesion, I believe that it sometimes attacks the endocardium without giving any other sign, which would surely attract the attention of the medical attendant to rheumatism, so that it would be well to examine the heart in every case where there is any doubt as to the nature of the ailment for which you are called in. Let me repeat that I regard this as very necessary in young children. I have more than once discovered endocarditis in children where "growing-pains" was the only symptom given, and where I have been called in to find the child going to school, or playing in and out of doors with the lesion well marked.

The subject is worthy a whole evening from this or any other Clinical Society, but having merely mentioned it, I must pass on, saying, however, that this complication occurs in perhaps 20 per cent. of all cases, but that epidemics of rheumatic fever vary greatly as to severity and frequency of complication.

*Pericarditis.*—This complication, which is also of grave importance, occurs in perhaps 14 per cent. of all cases of acute articular rheumatism, subject to the same variations as first

* Read before Toronto Clinical Society, Dec. 2nd, 1902.

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spoken of, due to severity, etc., and needs the same care for discovery as does the endocarditis, in mild and sub-acute attacks of rheumatism. Looking upon the pericardium as a large lymphatic space, we see the irritant gain admission to the space, and by the motions of the heart on the fluid of the sac, the poison is carried to all parts of the space, so that the whole surface, both parietal and visceral are usually affected at once. Before leaving the heart, I should mention dilatation of the right heart, and a febrile murmur not due to endocarditis; also a myocarditis with granular and fatty degeneration is observed very early with dilatation of the left ventricle. Symptoms referable to heart lesion, such as pain, palpitation and dyspnea, may not be disregarded, even when no bruit or friction sound is present.

*Pleurisy.*—The pleural membranes are quite frequently involved. Especially does the left pleura suffer when the pericardium is infected. The signs of dry pleurisy are usually well marked, and rarely is there much serous exudate. Coryza, tracheo-bronchitis, laryngitis and affections of the muscles of the throat are frequently present in the early stage.

This leads me to speak of follicular tonsillitis, which is regarded by many as related to rheumatism. The recession of the disease under salicylates would favor this view, though no doubt the cases in which such treatment fails are due to other than rheumatic infection. I think we get numerous cases in cold damp, or cold dusty weather of true rheumatic throat with simple, not follicular, tonsillitis and a general engorgement of the pharynx with involvement of the surrounding organs, stiffness and soreness of the neck and throat muscles, with general malaise and some febrile movement. These cases, which I have been in the habit of calling rheumatic sore throat, nearly always yield readily to anti-rheumatic treatment.

Pneumonia and edema of the lungs need only be mentioned in passing as rare complications of the disease we are considering, seen in the acute stage.

*The Skin.*—Time will only permit me to enumerate most of the skin lesions which are seen as complications of rheumatism. They are roseola, urticaria, erythema nodosum and multiforme, herpes facialis, petechiæ, general subcutaneous and submucous hemorrhages and subcutaneous nodules. Purpura is rare, unless Schonlien's disease, peliosa rheumatica, be considered as such. It is really an erythema and not a purpura, as the discoloration disappears at first under pressure. The subcutaneous nodules are seen most frequently in young subjects. They are found mostly on the fingers, dorsal and lateral surfaces of the hands, but may occur almost anywhere. Levison, of Copenhagen, mentions them as appearing especially on the front and back

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of the head. They are fairly movable, more or less painful, and disappear with the other symptoms of the disease, or sometimes last for weeks. It is interesting to note, as bearing on the relationship of the disease, that similar nodules appear in rheumatic subjects who have either endocarditis, chorea, or tonsillitis, with no joint lesion. They are composed of round and spindle cells and attached to the tendons of fasciæ. It may be said that similar nodules are met with, independent of arthritic disease.

*Hyperpyrexia.*—I have never seen a case of genuine hyperpyrexia. It is perhaps the most important of all the causes of death in acute rheumatism. It is attended with severe brain symptoms, though, as Hilton Fagge says, the existence of meningitis has been disproved. Levison also says that while there may be hemorrhage, œdema or hyperemia in cerebral rheumatism, there is no true meningitis. When the temperature runs over 105 degrees, with profuse sweating, there is imminent danger of hyperpyrexia, in which the mercury rises to 107, 108, 109 or 110 degrees F. It is worthy of note that in these cases of hyperpyrexia the mercury mounts very rapidly. Thus Wilson Fox, in his analysis of twenty-two cases, gives one in which the temperature rose from 103.5 to 109 degrees F. in two hours. As the treatment to be of any service should be instituted at once, before the higher centres become demoralized by the extreme heat of the blood, careful nursing should be the rule in all cases of rheumatism. Also, it should be remembered that the evil symptoms of any complication may show themselves in cases "which had seemed to be attended with little or no risk," as Fagge says. He instances one of Ringer's patients who was supposed to have recovered and about to leave the hospital next day, when cerebral symptoms set in, of which he died within two hours with a temperature of 110 degrees F. The first indication of the onset of hyperpyrexia seems to be a sudden loss of all pains, so that the patient finds he can move joints which were heretofore painful, without suffering. This seems a good omen, but unless the temperature falls at the same time it should make the physician fear impending danger, and use the thermometer at intervals of ten, twenty or thirty minutes. Interesting as this complication is, I must pass on, having briefly touched upon what seems to me the most important points in connection with it.

*Chorea.*—The association of Sydenham's chorea and arthritis has been noted for more than a century. Bright (1802) says that rheumatism was then distinctly recognized as one of the causes of chorea; and all the way down through medical literature, even up to the present, the association has been recognized.

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In a small volume of Osler ('94) on chorea he discusses the question, gives cases and the opinions of many writers on the subject, statistics, etc. He says that, as insisted upon by See and Roger, the arthritis in many cases precedes the chorea. In other cases the chorea precedes the rheumatism. In this connection, he (Osler) speaks of the manifestations of rheumatism in childhood being extremely varied and often so slight as to be overlooked, a point to which I have already referred. His statistics, which are too full and complex to give here, show conclusively, a relationship between chorea and rheumatism. He gives German See's conclusions as follows: Of two rheumatic infants, one at least will be choreic; of five choreic children, two will be rheumatic. Roger concluded that articular rheumatism, chorea, and endocarditis were three terms of one and the same pathological state or phase—*la chorei rheumato-cardique.*

*Examination of the Question.*—The German writers show a small percentage of coincidence, while English writers give from 20 to 50 and even 70 per cent. Sir Dyce Duckworth's figures are 78 per cent. Osler's percentage is about 21. Cheadle (*B. M. J.*) states that 77 per cent. of his cases of chorea had had previous endocarditis. Axenfeld states that the relationship of chorea to heart disease (endocarditis) is generally recognized under three conditions, as when (1) the chorea precedes the endocarditis, (2) when the endocarditis precedes the chorea, and (3) when they begin synchronously, or nearly so.

*Appendicitis.*—The rheumatic origin of appendicitis is worthy of a few words. Burney Yeo believes in the gouty and rheumatic origin of the disease. McNutt, of San Francisco, in the *American System of Practical Medicine* gives the following: "A patient, now aged 15, had appendicitis when eight years old, and again when ten. There was circumscribed peritonitis each time, but no pus and no operation. In the past two years he has had two attacks of tonsillitis which readily yielded to sodium salicylate. His mother is a great cripple and has suffered from rheumatism since he was five years old. Would the appendicitis have yielded to the sodium salicylate? The rheumatic origin did not occur to me at the time."

I shall now enumerate without remark the other diseases and conditions which are set down by various writers as being complications of rheumatism: Peritonitis, hemorrhage from bowels and uterus, acute nephritis, albuminuria, hematuria anuria, ankylosis, mental disease from emboli, muscular abscesses, synovial abscess, suppuration in joints, cystitis, hydrocele, orchitis, peripheral neuritis, rheumatism of the scalp, neuralgia, and sciatica.

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# SURGICAL INDICATIONS IN RHEUMATISM.*

By R. B. NEVITT, M.D., Toronto.

The characteristic ambition of the surgeon is to attain perfection of treatment, that of the physician to attain perfection of diagnosis. The instinct of the surgeon is to be satisfied with just so much of a diagnosis as will enable him to decide upon a line of treatment. The physician trained and accustomed to the patient solving of difficult diagnostic problems is not content with a utilitarian diagnosis. He wants to find out all that possibly can be found out. The first essential is accuracy of diagnosis, and until an accurate diagnosis is made all treatment must be haphazard and unscientific.

The diagnostic sins of the physician have been visited upon that grand old organ, the liver, while under the shield of that vague term, rheumatism, the surgeon has often taken refuge.

I have no doubt that many cases of Charcot's disease of the joints have been buried with the label of rheumatism attached. Nor can there be much doubt but that cases of joint tuberculosis have been laid at rest with a similar legend affixed. As our experience enlarged our diagnosis improved, and we are able to differentiate and to classify more accurately.

The definition of rheumatism as a disease of the joints, often associated with inflammation of the heart, and due to exposure to cold and wet, is not sufficient for the present day. For some years there has been a tendency to regard rheumatism as a specific disease of microbic origin, and claims have been advanced and proven to the satisfaction of their advocates that a specific diplococcus has been discovered, cultivated and inoculated, with the result of setting up an arthritis with all the ear marks of rheumatism. I do not feel called upon to enter into the discussion of the arguments *pro* and *con* of this thesis. These, no doubt, will be sufficiently elaborated by my colleagues this evening. But accepting the view as above enunciated, the analogy to scarlatinal gonorrheal rheumatism, to tubercular, septic and rheumatic arthritis becomes more clearly marked than the clinical symptoms have hitherto permitted. It follows from this that the significance of the rheumatic diathesis is curtailed to very slight proportions, if indeed it exists at all. It has long been a matter of observation that rheumatism has no effect upon the healing of surgical wounds; that at most a trauma occurring in a rheumatic subject may be followed by long-continued swelling and by persistent pain in the part, and that aside from the high fever and associated depression, and

* Read before Toronto Clinical Society, December 2nd, 1902.

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from the cardiac complications, rheumatism has no influence on surgical operations. I would not, however, have you infer that I would choose a patient suffering from acute rheumatism as a subject for surgical attack.

Surgically, rheumatism possesses interest from a diagnostic point of view. It has frequently occurred to me, and in this I feel sure that I may claim your sympathetic indulgence to meet with patients with joint effusion whom I felt constrained to hand over to my colleagues on the medical side. On the other hand, cases of arthritis have been turned over to the surgical wards after the diagnostic and therapeutic skill of the physicians had been vainly exercised upon them.

The following history illustrates this point so well that I crave your indulgence while reciting it. A young man now 24 years of age, whose father died of pneumonia; the mother alive and suffers with chronic bronchitis, and several members of the family have perished with tuberculosis of the lungs and brain. At the age of 7 years was attended by me with an affection of the knee joint, diagnosed and treated as tubercular arthritis, and recovered. A number of years after this he was treated by another physician for an affection characterized by pain and swelling in many of the joints. He was told he had rheumatism. He recovered. He is now a motorman on the street cars. Some two years ago he applied to me for help for his right knee, which began to be painful and to swell, and whose functions were becoming limited. The trouble began insidiously and progressed slowly. He attributed the trouble to the action of the foot pressing against the ratchet of the brake, causing a constant and at times a severe strain upon the knee. It was this joint which I had treated some seventeen years ago. I put him to bed and put on a plaster-of-Paris splint, and gave him a prolonged rest. While he was in bed and wearing the splint the other knee became swollen and painful and continued so for some weeks. The pain and swelling under persistent rest gradually subsided and passed away, and after eight or ten months the plaster was removed from the right knee and he was allowed cautiously to resume active use of the limb. He has now returned to his work with only slight impairment of function. Was the diagnosis in the first attack correct? Was it correct in the second attack? And in the third attack what was the nature of the affection?

Again, cases of osteomyelitis have not been recognized as such, but have been treated as rheumatism. I recall one case in particular in which a child was admitted to the Hospital for Sick Children with the diagnosis of rheumatism. My confrere on the medical side handed the case over to me, when I found the hip joints full of pus and subsequently the elbows and

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shoulders became similarly affected and necrosed bone was removed on more than thirty occasions from the humerus, the jaw, the ribs, the ulna and radius, both femora and both tibiæ, and eventually the child recovered. Cases of a similar character can be recalled by many of you.

It has long been my custom to exercise considerable care in inquiring into the diathetic conditions of a patient, and in many instances it has seemed to have been of benefit to the patient, and although at present we may not attribute so much influence to the diathesis as formerly, yet the influence of the inquiries have been beneficial as contributing to greater accuracy in diagnosis.

The so-called gonorrheal rheumatism and rheumatic arthritis, as a matter of fact, should no longer be considered as rheumatism. Yet, since they have so long occupied a position in the category of this disease, it is as well not to exclude them from our consideration of the subject.

Rheumatism holds but a small place as a provider of surgical work. At one time tuberculosis was almost wholly a medical disease, and it is only of late years that the knife of the surgeon has beneficently attacked the medical territory of renal diseases. So in the not-distant future the surgeon may revel in the rheumatic provinces of the physician. Indeed one advanced and prominent physician has conceived and proposed a surgical operation designed for the relief of mitral stenosis, due to rheumatic endocarditis.

Tonsillitis, which occurs so frequently in rheumatic subjects and is so favorably influenced by the salicylates, is no doubt an example of a mixed infection, and the painful and distressing abscesses that form about the mouth and neck are due to the absorption of the ordinary pyogenic microbes. The rheumatic coccus, entering at the same time, is slower in its growth, and may remain latent for a long time to result finally in an attack of rheumatism.

The glandular tissues which enter into the formation of the appendix vermiformis may likewise offer a peculiar affinity for the rheumatic coccus. The association of appendicitis with rheumatism at all events is sufficiently frequent to permit of its being regarded as an etiological factor.

If the glandular structures of the tonsil and the appendix offer a frequent entrance to the rheumatic infection it would be a curious matter for observation to discover how excision of the tonsils affects the rheumatism. Does it prevent future attacks, and does excision of the appendix render one less liable to attacks of rheumatism? Cases of excision of these glandular tracts are now surely sufficiently numerous to base statistics upon.

Rheumatic affections of the serous sacs, the pericardium,

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pleura, and peritoneum occur and often demand surgical interference, which must be rendered independently of the primary disease. Rheumatic affections of the nerves, as sciatica, sometimes call for surgical help in the way of stretching the nerve Osteitis, periostitis, and so forth, may call for linear osteotomy, or indeed for trephining, before relief is obtained.

The infrequency of suppuration, which is a marked character of rheumatism, most probably affords an explanation for the paucity of surgical operations in the joint affections. Yet in the arthritis of gonorrheal rheumatism opening and irrigation of the joint affords an efficacious and expeditious method of obtaining relief in obstinate cases.

In chronic rheumatism, osteotomy, and the removal of dendritic growths has in many cases been followed by relief and by restoration of the function of the joint; but its application is limited and can only be considered when one of the larger and more important joints is the seat of trouble. It would appear hopeless and uncalled for to attempt operation where many joints were involved and the disease is progressive.

Operation may be considered in cases of malposition of a limb, or where tendons are glued together, or even in cases of true bony ankylosis. Most often massage and careful mechanical treatment is required. Brisement force is, in my opinion, not judicious except to obtain ankylosis in a more favorable position. In nearly every case, after the forcible breaking down of adhesions, the subsequent attempts at passive motion become so painful that the patient refuses to have them continued, and the joint falls back into ankylosis. A plan to prevent ankylosis is by interposing a film of metal between the raw surfaces.

In chronic rheumatic arthritis operation in the way of exsection of a joint has been done and proved of benefit in selected cases. In rheumatism the lesions are in the tissues around the joints, in the fibrous tissues enveloping the joints, and if the synovial membrane be affected, the effusion is serous in character, and at most only false ankylosis is introduced.

In chronic rheumatism there is very little tendency to destruction of the tissues of the joints and no tendency to the formation of new bone about the joint. No medicinal agent, no electrical application will suffice to arrest the course of rheumatic arthritis unless associated with proper mechanical treatment.

Arthritis, embolism and aneurysm frequently are of rheumatic origin and may call for operation in order to obtain relief or cure.

Torticollis is sometimes caused by rheumatism of the cervical vertebræ; it may be distinguished from the ordinary forms of torticollis by the absence of tension in the sterno-cleido-mastoid muscle. Operation is not called for, but rather massage of the affected vertebræ and general rheumatic treatment.

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The association of hemophilia with rheumatism has been mentioned by various authors. The connection has been refuted by others and the arthritic and muscular and periosteal pains explained by the presence of effused blood. Still the relation might be borne in mind when contemplating operation upon a rheumatic subject. Rheumatic iritis, though it has no distinctive features aside from its association, may require the usual operations called for in ordinary iritis. Primarily rheumatism offers but little for the surgeon's knife, but its secondary effects may open up a wide field for operative surgery.

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## RHEUMATIC CONDITIONS IN THE UPPER AIR PASSAGES AND IN THE ORGANS OF SPECIAL SENSE.

By J. O. ORR, M.D., Toronto.

Rheumatism as a causative agent in diseases of the upper air passages and organs of special sense has not received as much attention from the recognized authorities on those diseases as one might expect from the enormous amount of literature written thereon. In fact it is scarcely recognized at all by some, and by others only as a probable exciting cause, or an indirect contributor. There are but few diseases upon which the authorities generally agree as being caused by rheumatic poison.

Gradle, of Chicago, in his recent work says, "Rheumatic conditions as such are not of frequent occurrence in the upper air passages." "Rheumatism," he says, "has no definite relation whatever to any nasal lesion." On the other hand, Haviland Hall considers chronic rhinitis to be caused, in some cases, by rheumatism or to occur more frequently in chronic rheumatics.

Hay fever was by many authorities some years ago said to be purely of rheumatic origin. It certainly does in a few cases bear in its clinical history some similarity to rheumatic diseases. It, however, is now recognized purely as a neurotic disease, and as such occurs more frequently, and in a more aggravated form, in patients with a lowered vitality, and only as a cause of lowered vitality can rheumatism be recognized as an etiological factor in hay fever.

Bosworth attributes naso-pharyngeal catarrh in some cases to rheumatism, but this is extremely doubtful. Naso-pharyngeal catarrh is of frequent occurrence, more so in those of a tubercular than rheumatic tendency. I have not in my practice met with a case I could connect with the rheumatic habit. Tonsillitis alone of all the diseases in this region has given rise to a more

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general discussion, and all agree that between it and rheumatism there is some undoubted connection; but as to what that connection really is, all do not so generally agree. Fowler, in his recent work, states that tonsillitis precedes acute rheumatism in as many as 80 per cent. of the cases, while more conservative authorities place it between from 5 to 20 per cent. It occurs also in a very considerable number of cases during the course of the rheumatic attack. In fact few cases of acute rheumatism run their course without more or less inflammation of the tonsillar region, and few cases on the other hand of tonsillitis run their course without the patient complaining of some rheumatic pains; but that acute suppurative inflammation of the lymphoid tissue surrounding the tonsil should be caused by rheumatic poison does not seem to me to satisfactorily explain its cause.

In the ear, rheumatic conditions are more serious and more generally met with. Myringitis is no doubt due in some cases to the rheumatic poison. There is a variety of this disease characterized by a very slight redness of the membrana tympani, and excessive injection of shrapnels membrane associated with slight pain at irregular intervals, aggravated by movement of the ossicles. There is defective air conduction with subjective noises of a blowing character. This condition, while comparatively frequent, is, I believe, due entirely to rheumatism. It runs a very chronic course, and in most cases (unless vigorous treatment is early adopted) ends in those forms of so-called dry catarrh of the middle ear, in which the hearing is seriously and permanently affected.

Affections of the ossicles of rheumatic origin are also met with, especially in those forms of progressive deafness in which we have fixation of the stapes, combined with ankylosis of the ossicles, associated with most distressing noises in the head, which are so disagreeable alike to patient and physician.

In the eye we have eczematus conditions of the lids and cornea that may be due to rheumatic virus, although I think this improbable. However, paralysis of the external ocular muscles is undoubtedly caused in many cases by rheumatism.

Of the diseases of the eye none can be so directly attributed to rheumatism as certain forms of iritis, especially that form which is characterized by severe pain, and which recurs with regularity at certain periods of the year. It occurs mostly in chronic rheumatic patients. It has a great tendency to relapse under the slightest provocation, and may occur in one or both eyes. It yields readily to treatment, and recovery is complete without any ill results, especially if at the outset means are taken to prevent the formation of adhesion of the iris.

These are the principal conditions recognized by the leading authorities on those subjects that are with any certainty connected with the rheumatic habit.

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# THE TREATMENT OF RHEUMATISM.*

By J. T. FOTHERINGHAM, M.D., Toronto.

The remarks one may have to make upon treatment are of necessity largely determined by the trend of the discussion of the topics which have preceded. A systematic statement of the treatment of rheumatism must be very brief to comply with the limitations imposed as to time. It is difficult in any case, but particularly so in the case of rheumatism, to do more than generalize, as it is not the disease but the patient which we have to treat, and in the absence of the patient only general statements would appear possible. Furthermore, the term has come to be not a specific but a general one, and the state of pathological opinion on it is, to say the least, unsettled. Bearing in mind the now generally accepted view as to the infective origin of rheumatism, the first indication for treatment would seem to be prophylaxis. The tonsils may be looked upon as a frequent point of ingress of the infection, and hence, particularly in children, recurring tonsillitis, urticarias, erythemas, and similar skin affections, thick, scalding urine, transient pains, specially so-called growing pains; fleeting pyrexia, nocturnal restlessness, palpitations, pleurisy and other suspicious symptoms, should all be promptly guarded against by anti-rheumatic treatment.

No definite line of treatment can be laid down, but rheumatism always gives abundant scope for skill and care. With marked tendency to natural recovery, but with no definite time-limit, and with distinct tendency to relapse, it is difficult to determine the part played by drugs in establishing a recovery, and hence the great list of drugs which have been recommended. Some manifestations are easily controlled, such as arthritis; others with the greatest difficulty, for instance, carditis.

Another general statement which may be made is that depleting treatment, such as bleeding and purging, is bad.

One may attempt to systematize the treatment, at any rate in his own mind, but cannot hope to say anything new; but if, on the other hand, in his attempt to say something of interest, one drops into details, one's remarks on treatment are apt to end, as military men would say, "in the air."

The three main lines which a statement of treatment may reasonably be expected to take are: (1) Treatment of acute rheumatism; (2) treatment of chronic rheumatism; (3) that of complications.

1. Treatment of Acute Rheumatism.—With regard to the treatment of acute rheumatism, the infective view of the origin of this disease compels regard to the question of constitutional

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resistance. Vigorous treatment by powerful drugs may do harm by reducing the individual's resisting power more effectually than they control the disease. Poynton declares that he believes that in dangerous and complicated cases of visceral rheumatism, specially in carditis, the best results come from palliative measures, rest, careful feeding and nursing, moderate doses of salicylates for pain and arthritis, stimulants for cardiac failure, small doses of opium for cardiac distress and sleeplessness, proper elimination, mild tonics, in convalescence; in short, a watchful but gentle treatment. Under such measures some of the most desperate cases have rallied, and fewer have gone to the bad with the sudden development of urgent symptoms. With these remarks one may state that the treatment of acute illness resolves itself into (*a*) constitutional and (*b*) local measures:

(*a*) *Constitutional.*—Absolute rest in bed. This is of prime importance, specially with children, as tending to avert possible attacks of carditis, or to control them if developed. Fortunately pain usually compels this. The room should be warm and of even temperature, well ventilated but without draughts, specially during the sweating stage of the illness. The bed should be firm and well made, better high and narrow, and adjusted especially with regard to the difficulty which even a strong nurse will have in handling a patient to whom even the least movement may cause great pain. The personal and bed-clothing should be woollen, but not too abundant, as the drenching and ill-smelling perspirations must be specially considered. The diet should be in the main, fluids, preferably milk. Fats, while of the utmost value in chronic, are contra-indicated in acute rheumatism as apt to impair digestion while the fever lasts. Carbo-hydrates, specially farinacea, are the mainstay of the nurse, while sweets are almost more unsuitable in acute than in chronic rheumatism. As to proteids, there is a singular unanimity among physicians of high repute against their use in acute rheumatism. Latham insists that beef-tea and similar meat preparations cause relapses. Fish, poultry and white meats may be gradually resumed after the temperature has been normal a week, the red meats later and with caution.

*Drugs.*—As is the fashion in these days, drugs have been left to the last in the inventory of the means of cure. While their name is legion, and the majority of them useless, there are some of undoubted value. First in the list (1) I would place purgatives, specially mercurial salines used early. Next I would mention (2) vascular depressants, as aconite, veratrum viride, and cimifuga, which were used in presalicylic days, and if given early are doubtless of value. (3) Antipyrin and antifebrin are sometimes of distinct service, even though depressing, in those

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few cases in which salicylates fail, till then they should not be exhibited. (4) Methylene blue, salophen, aspirin (or acetyl salicylic acid), trimethylamin and propylamine, guaiacum, colchicum, rhus toxicodendron, and sulphur, are a few of the drugs which have been found more or less useful in isolated cases. Opium, and especially in the old days full doses of opium and nitre, was occasionally used, and may be used still, specially in cases of cardiac complication, and where salicylic treatment has not proved satisfactory. (5) Alkalies, such as the citrate, acetate, and bicarbonate of potash, form a very important group. In ordinary acute cases doses of 30 grains every four hours are to be used, till the urine has been rendered neutral, when the dose is gradually reduced. After specially large doses there is a distinct tendency to depression, and in some cases marked diarrhea. (6) I have purposely left to the last any mention of the salicylates. Bearing in mind the infective theory, I would mention quinine with this group, which used specifically has often been useful, specially in the later stages. These drugs act principally by rendering the blood and tissues unfit culture mediums for the cause of the disease, the explanation being similar to that given for the benefit derived from these drugs in other infective disorders, such as pneumonia.

The drugs usually employed are salycin, salicylic acid, salicylate of soda, oil of wintergreen, and salol—the later on account of containing a high percentage of carbolic acid being dangerous in full doses, and the danger increasing directly with the youth of the patient. Also, I would mention the less common salicylates of bismuth, lithium, etc. In speaking of the treatment of acute rheumatism it need scarcely be mentioned that the use of the salicylates has outlived all adverse criticism. They are not now looked upon as productive of visceral complications nor of relapse, though they are not believed to give quite the same security against them as alkaline treatment, or rather a treatment in which alkalies and salicylates are combined, and I think that the great majority of practitioners now would look upon it as almost malpractice to refuse to a patient the relief of pain and fever which this treatment affords. It was introduced first in 1876 almost simultaneously by Stricker, F. Traube's assistant in Berlin, and by Dr. Maclagen, of Dundee. Willow tea is said to have been known for generations by the Hottentots and Boers of South Africa as a remedy for rheumatism. Among bad effects from the use of salicylates must be mentioned: (1) Nausea and vomiting, with epigastric pains; (2) enfeeblement of the heart's action. The exact effect of the drug in this direction is difficult to determine, as heart failure in rheumatism has been ascribed by the opponents of the salicylates to the drug and by its defenders to the effect of the disease on the heart muscles.

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(3) A third undesirable effect, or group of effects, is the cerebral symptoms—deafness, giddiness, and noises in the ears, sometimes severe headache and even delirium. Disturbances of this sort, due to the salicylates, are very likely, if they occur, to be accompanied by a lowered temperature, as if the temperature remains high they may reasonably be attributed to the fever. Another occasional bad effect from over-dosage is epistaxis. Much of the adverse criticism of the drug is due to the error sometimes committed of withdrawing it not gradually, but suddenly on cessation of pain or fever; a great mistake. In spite of prolonged investigation and fairly complete knowledge of the action of salicylates so far as pharmacology goes, their specific mode of action in rheumatism, as yet ill-understood, as is admitted by so late an authority as Hale White in his text-book of 1901. It is likely that the infection finds a specific antidote in the drug, as that of malaria meets one in quinine

(*b*) *Local.*—The local treatment of acute rheumatism consists of course of rest, warmth, special coverings and hot applications. The simpler the applications are the better in acute rheumatism. Elaborate liniments and counter irritant applications while useful in chronic, are useless in acute rheumatism, Fuller's lotion of laudanum and bicarbonate of soda, the one to relieve pain and the other to neutralize the over acid secretions of the skin, is quite sufficient. Indeed, in view of the excessive perspiration, oiled silk and other impervious coverings are undesirable. A warm flannel covered with wool and many-tailed bandage is usually the best. One will occasionally meet with most happy results from the inunction of say 30 drops of oil of wintergreen over the inflamed joint. The oil of birch, *betula lenta*, known as betulol, I have seen act like magic used in this way.

When one thinks, not of the joint affections, but of the muscles, lumbago, etc., one has much the same to say about treatment, except that local stimulants, and massage are all of distinct service in the latter case—that is, with the muscles. Dry heat is usually more relieving than moist.

2. Treatment of Chronic Rheumatism.—The treatment of chronic rheumatism, like that of acute, falls into the two divisions of local and constitutional. The constitutional treatment of chronic rheumatism is in just as unsatisfactory a state as its pathology, as there are allied conditions, such as rheumatoid-arthritis, gonorrheal rheumatism, etc., which are not infrequently mistaken for the true rheumatism. As compared with acute rheumatism, the relative value of constitutional and local treatment is almost reversed, since while the former is still very important, the latter is of much greater importance than in acute conditions. The line of action, too, depends partly upon whether the disease is muscular or arthritic.

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*Constitutional.*—Before any specific measures one must place food. Whatever view we may hold on the pathology of this condition, there is no doubt that malnutrition exists. Anemia is, as a rule, plainly marked, and therefore food must be abundant, varied, fresh and digestible. Fresh fruits and vegetables; a due proportion of starches; sweets limited, or quite excluded, as well as malted and most spirituous liquors (particularly beer and sweet wines), and meats being used rather freely. More particularly fats are a necessity, as shown by the value of cod-liver oil in such cases. Onions and celery are two vegetables of which such authorities as Whitla speak highly. Onions especially are valuable on account of the high proportion of sulphur which they contain. Extremes in diet are usually unsafe. Fads, such as the Salisbury treatment on the one hand, and vegetarianism on the other, are a mistake. As to medicines, they may be grouped into the two classes, of alkalies and alteratives on the one hand, and hematinics on the other. The first group contains all the iodides, specially sodium iodide, arsenic and sulphur, and, of course, the ordinary potash and soda salts. The danger in their use lies in forgetting that alteratives without good food and exercise are depressing and aggravate the anemia already present. The alkaline cachexia of patients who go without supervision to the various anti-rheumatic water-cure establishments is familiar to us all.

*The Iron Treatment.*—As to this treatment, details cannot be given. Suffice it to say that the form which I have found most useful is the soft Blaud's mass with arsenic, made by Duncan and Flockhart. Salicylates are useful for pain, given in moderate quantities. Ziemssen says one dose at bedtime of 40 grains or so. Sulphur, both internally and externally, is sometimes of marked value: a heaping teaspoonful in honey or marmalade each morning and the powder freely dusted over the wool with which the inflamed joint is dressed.

3. COMPLICATIONS.—The surgical or orthopedic treatment of the results of chronic rheumatism has already been taken up by Dr. Nevitt. We now reach, finally, the third main subdivision of rheumatism—that of complications. The two main complications of acute rheumatism are carditis and hyperpyrexia. As to heart complications, no attempt can be made to discuss the topic through lack of time. It is one on which many a volume has been written.

*Hyperpyrexia.*—This one may define as being a temperature of 105 degrees F., especially if it has been reached rapidly, with signs of going on up. One must then remember that the heat-regulating mechanism is hopelessly upset, and therefore attempts to control the situation by drugs are probably useless. *A priori*, one would use antipyrin, antifebrin or phenacetin, as the

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increased temperature is due to increased heat production, not to diminished heat loss, and these drugs act by diminishing the heat production through their effect upon the oxidation processes in the body. The authorities agree that time spent on them is wasted, and that the cold pack or bath used at once gives the only means of escape. Besides being a waste of time these drugs are depressing to the heart, already sorely tried by poison and fever.

Dr. Armstrong, of Buxton, has spoken strongly in favor of the immediate use of the cold bath, and believes that in many cases the time spent in cold sponges or baths has determined a fatal issue. His method and rules are that the patient should be immersed in water at 92 degrees F., which should be cooled down to 72 degrees F., and the patient kept in usually from ten to thirty minutes, with ice to the head, until the temperature falls below 100 degrees F. The condition of the heart calls for careful consideration during this procedure. On replacing the patient in bed, warm blankets and hot water bottles should be applied. The bath should be repeated as often as the temperature reaches 105 degrees F.

I can only close my contribution to this symposium with congratulations to the other Fellows on the programme upon the character of the discussion, and with thanks for the pleasure they have given me as I listened. As for my own share in it, I can only express the hope that it may be half as serviceable in systematizing our ideas on the subject to the rest of you as it has been to myself.

## SEPTICEMIA AND THE CURETTE.

By H. PLYMPTON, M.D

To attempt to break up an old established custom in any line of life is at best a thankless job, and one likely to call down harsh criticism upon the head of the daring iconoclast.

To attempt to uproot old prejudices existing in favor of a certain line of practice in surgery, and diametrically oppose such practice, is to invite from some adverse criticism of the harshest kind. The only recompense for this is a logical refutation of, or concurrence in, the argument advanced on the part of other members of the profession. This latter is what I hope for, and if I provoke a discussion or start a line of thought in the minds of half of the readers of this article, I shall have achieved all I started out to do.

Curetting the uterus to remove fragments of afterbirth or other *debris*, has been taught in our medical schools from time

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immemorial, and it is firmly fixed in the receptive and retentive mind of every medical student that the first move following any such abnormal uterine condition is to cleanse the uterus by means of the curette.

That the organ should be thoroughly and aseptically cleansed admits of no argument, but that the work should be done with the curette, I deny most emphatically.

The majority of cases of death following the decomposition of fetus or placenta in utero are caused by the use of the curette, and I hold that septicemia may be avoided if a more rational procedure be resorted to.

The condition of the uterus containing septic matter is one of great congestion, the thickened walls being coated internally and over the os with a thick, brown, tenacious mucus. The congestion is active, and therefore the more dangerous in the event of the admission of septic matter into the circulation.

If the curette is used, denuding the walls of their protective covering, an immediate vaccination takes place with a septic virus, septicemia following in an incredibly short space of time (chemical metamorphosis is marvellously rapid in the circulatory system) and death quickly ensues.

If, without using the curette, we can remove the septic matter from the uterus without disturbing the mucous covering, and enable the uterus of itself to expel the coating, we shall have taken a long step forward in the treatment of this class of uterine cases.

The uterus, by reason of its congestion, may be made to perform a self-cleansing act by exciting the exudation of the serum of the blood into its cavity, thereby washing itself out, and expelling all septic matter instead of absorbing it.

This process of exosmosis is induced by a properly combined alkaline solution at a temperature above 100 degrees, and a strict avoidance of bi-chloride, carbolic acid, formaldehyde, or any antiseptic of an acid reaction or astringent nature, which would coagulate the fibrin and albumen of the blood.

My method of procedure is as follows:

1. The gentle removal of whatever fragments are lying in the uterine cavity, by means of forceps, care being taken not to tear from the walls any adherent piece.

2. The gentle flushing of the uterine cavity with the alkaline solution (100°), the reservoir containing the fluid being not more than two feet above the level of the hips.

If the flushing could be continuously administered for a few hours (say two or three) the conditions would be more speedily reduced to normal, but the discomfort of the position of the patient (on a douche pan) prevents this, and a flushing once

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every two hours with one quart of solution is about the limit of treatment.

For flushing the uterus, I use a small dilating uterine douche, and as there is plenty of room for the escape of fluid and fragments, there is no danger of fallopian colic or salpingitis. The first flushing is frequently followed by contractile pains and expulsion of any previously adherent pieces, together with much of the mucus.

A tablet of Ext. Cannabis Indica..... gr. ¼
Ext. Ergotin..... gr. ½

every hour till desired effect is produced will contract uterus and alleviate pain. The bowels should be moved freely, both by enema and catharsis.

During the interval between douches, the patient should be kept on her back, with the hips sufficiently raised to permit the retention in the vagina of as much of the alkaline solution as it will hold.

The rapidity with which this treatment will reduce temperature, relieve pain, stop vomiting and remove offensive odor is marvellous to one who has not tried it. Sometimes two flushings are sufficient to cleanse the uterus thoroughly ; vaginal douches being all that are needed subsequently to complete the work.

Uterine congestion is speedily relieved, and the uterine discharge changes from brown, thick, bad smelling mucus, to a thin transparent one, accompanied or followed by more or less of a flow of blood.

A reduction in the frequency of the flushings is desirable as soon as a tendency to return to normal conditions begins to be observed, as it frequently will within twenty-four hours. Then simple vaginal douches every three hours with an occasional uterine flushing if symptoms indicate it.

The action of exosmosis (and endosmosis, for there is every reason to believe in the absorption of some of the fluid) is what is desired to relieve the existing congestion, as in a bronchitis, pneumonia, congestion of kidney, congestion of any mucous membrane, etc., and is the most rational means of restoring to normal condition.

I do not wish to be understood as decrying the use of that most valuable instrument the curette, but only the abuse of it, to wit : its employment under such conditions as make it practically a sharp weapon loaded with septic matter, dangerous beyond the poisoned arrow of the Malay, or the fang of cobra, and utterly opposed to our modern ideas of antisepsis.

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# GLIMPSES FROM THE HISTORY OF MEDICINE.

By H. S. HUTCHISON, M.B.

## I. Introduction.—The Medicine of Antiquity.

The study of the history of medicine has ever been a source of delight to the master minds of physic. By Hippocrates the Great, and through all ages, we find the physician urged to devote attention to its pages. The noble light which it casts upon the profession of the past, the opportunities which it affords of placing on their proper relative bases the currents of thought of the present day, and the grand examples which it contains of the heights reached by the earnest development of human resources, are all factors which render intelligent consideration of it a positive duty.

Each year, at the present time, much new and pleasurable reading is published, dealing for the most part with single phases in this history, and this fact may make of interest a series of brief outlines of the periods of medical thought and activity with short references to the great men of each, culled from the rather extensive works on the subject and arranged in consecutive order.

The medicine of antiquity, that practised before the age of the Roman Empire, differs from subsequent systems in one great essential. It was theurgic. Though guided by influences of divinities of various sorts, however, a link of interest with the past is formed for us by the fact that there seems to have always been a middle man to supply the demands of human nature, and this individual's relationship with his sick fellows resembles surprisingly the rôle filled by the physicians of the present day. The peoples whose medical development took place along such lines include the Egyptians, Indians, Babylonians, Medes, Persians, Jews, Chinese and Japanese. Owing to the association of religion with the art of healing in all instances but the last two, the actual workers in the field were, in the first place, priests. Hence with some nations, as in the case of the Levites amongst the Jews, men of one caste alone were entitled to follow the paths of medicine. It is certain, however, that such men devoted their best energies towards their medical rather than their priestly work, and as the race progressed a separation invariably sprang up between the two fields, until with the fuller ripening of the people a gradual specialism appeared amongst its doctors. Thus we read of herb-doctors and knife-doctors, the names of men famous as oculists have been preserved to us since the time of ancient Egypt, and we are assured that later still there were physicians

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for each part of the body. In China and Japan, in spite of the influence of deities, the medical profession has always been distinctly separate from the priests, and were it not for the nature of the people might be expected to have reached great heights, which is happening for the first time only in the last century.

In only one of the above countries can we find no trace of definite practitioners who were consulted at their offices and paid visits to the homes of the sick. In Babylon it was the custom to expose their sick on the streets to be interrogated of passers-by as to symptoms. In the case of any of the latter having come through the same experience, it was his duty to explain the means successfully adopted. Thus it is to Babylon we must give credit for a system which, standing the test of time, exists in many places at the present time to serve the useful purpose, no doubt, of counteracting the too scientific tendency of modern medicine.

No lack of medical literature seems to have hampered any of these peoples, and in most cases abundant writings, supposedly of divine authorship, were forced upon the physicians with definite instructions set forth which could not, under pain of punishment, be departed from. Thus the Egyptians, in their celebrated Papyros Ebers (now in Germany), had a work which was a compilation of the writings of the God Thot, together with those of the most skilled physicians of all countries at the time, a famous Egyptian filling the duties of editor. Thus at so early an age have we evidence of international medical intercourse! The Persians and others were similarly guided by Zend-Avesta or Living Word, the work of a great priest, Zoroaster, who lived about B.C. 1000. It was acknowledged in the pages of this work, however, that the "Word" needed practical help in the curing of disease, but a cure under its directions was claimed to affect the soul as well as the body. The Jews had for their foundation an extensive work known as the Talmud. The Indians and the Chinese had many laborious books, of which those possessed by the latter were used entirely, also by the Japanese.

Medical education varied from the oral teaching of the Indians to the laborious memorizing *in toto* of voluminous Chinese books in Japan, to the bedside teaching of others, and to the presence in Egypt of five medical colleges, with libraries, laboratories and students' residences. In China, however, it has been possible for anyone to assume the title of doctor and to commence the practice of medicine without any preliminary education.

The knowledge acquired by these peoples must certainly seem wonderful when it is considered that, in the first place,

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the most ignorant superstitions were brought to bear on causes, treatment and outlook, and in the second place, no accurate knowledge as to anatomy could be formed on account of religious objection to dissection. In therapeutics, purgatives, bathing, cupping, the use of enemata and of emetics, were common-sense measures which underlaid many fanciful remedies. In physiology, such experiments as successfully removing the spleen in animals had been performed. In midwifery, though it was the custom in ancient times for women to attend to the duties of the lying-in chamber, yet the physicians were always brought in when difficulties presented themselves, and hence a knowledge of treatment, at least, was necessary. Thus in India considerable skill in cephalic and podalic version, embryotomy and Cesarian section was possessed, and in Japan several centuries ago a celebrated and worthy obstetrician sprang into prominence whose writings show a knowledge of embryology and other aspects of the branch. It is in the use of the knife, however, that the greatest strides were made by all, the people of the Ganges being the boldest. Circumcision, venesection, laparotomy, herniotomy, cranial surgery, operations for imperforate anus and plastic surgery all being practised before the Christian era.

A curious operation for stone is described in which by two oiled fingers in the rectum the stone was pushed forward to make a projection above the symphysis pubis, whence it was removed by excision, a warning being uttered to leave no spicules behind in the bladder.

The preparation of mummies by the Egyptians was to some extent connected with the medical workers, and in any case is of interest. The brain being removed through the nasal cavities by means of hooks, and the abdomen being emptied, the two cavities created were filled with spices. The body was then placed in caustic soda for seventy days, after which it was removed, wrapped in fine linen, and placed in an air-tight coffin. The fact that most of the mummies found seem to be the remains of great dignitaries is accounted for probably by the costliness of the process.

In both India and amongst the Jews the inoculation of natural and artificial virus of smallpox was practised as a preventative measure, and it is quite possible that a knowledge of this may have given no little strength to the courage of Jenner in advocating his views with such persistence!

The remuneration received by the medical men by the different races of antiquity seemed to result in most cases, favorably. In Egypt golden and silver models of the diseased part of the patient were given as fees, together with wine and fine meats. The Persians had a regular tariff, the form of exchange

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being in the way of cattle. Thus the chief of a tribe paid with a farm, and the son of a family with a large ox, and the famous doctors of the day were consequently owners of great numbers of animals. In China, affairs were so favorable for the physicians that the government issued an official notice to the people that, as physicians were in the habit of refusing to see patients before one p.m., and many were accustomed to sit up very late smoking opium and drinking, they should only receive one half their fee if they did not come at once when needed. In Japan, unfortunately, a prophet advised people to refrain from paying physicians well, lest they should neglect their professional duties, and the custom is to pay according to the success of the treatment. And yet Japan is not the most advanced medical nation in the world!

In spite of the theurgic element in medicine the position universally accorded the physician amongst these peoples was one of high respect. He in turn must observe certain forms of conduct, and we find in Indian writings the following qualities set forth for a doctor to possess: "Absence of passion, chastity, temperance, amiability, veracity, generosity, consideration for the sick, earnestness, a desire for knowledge, freedom from boasting, secrecy, and above all reflection and independence of thought." A goodly list and one not diminished in practical value because of its age. In seeking in the literature mention of the opinion held in regard to the position of the physician, no less a source than the Old Testament need be consulted, wherein we find the following noble sentiment: "Honor a physician! The skill of the physician shall lift up his head, and in the sight of great men he shall be in admiration. When thou feelest sick call upon God, and bring the physician, for a prudent man scorneth not the remedies of the earth."

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# Society Reports.

## AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Fourteenth annual meeting, held at Washington, D.C., September 16th, 17th and 18th, 1902. The President, Dr. Edwin Ricketts, of Cincinnati, O., in the chair.

### Removal of the Gall-Bladder Through the Lumbar Incision.

Dr. Walter P. Manton, of Detroit, reported the case of a patient 38 years of age, the mother of five children (two abortions), never robust, but able to attend to her domestic duties. She had suffered from a number of gastric attacks, but there had been an absence of symptoms pointing to disease of the biliary tract. Examination showed a loose left kidney, while the right kidney, displaced downward and inward, appeared to be double its normal size and had certain projections which led to the diagnosis of nephroptosis, with probable cystic metamorphosis of the kidney. At the operation, through the nephropexy incision, the fatty capsule of the kidney was found to be embedded in adhesions, which had given rise to the appearance of the enlargement. The kidney, which was normal in size and structure, was delivered on the back and placed astride the wound. Below the kidney pouch a distended gall-bladder, containing fluid and nineteen gallstones the size of hazelnuts, was found surrounded by adhesions. This was enucleated, tied off at the cystic-duct, and removed. The kidney capsule was split and peeled off to the lateral line, fixation sutures were introduced and the organ was returned to its place. A strip of gauze for drainage was carried from the upper angle of the external wound to the stump of the cystic duct. The patient made a good recovery.

### Abdominal and Pelvic Surgery and Drainage.

Dr. Joseph Price, of Philadelphia, said that the more progressive and successful specialists practised most extensive sponge packing or drainage. The modern operator did the same by his gauze pack or the dry operation. A number of operators, doing fairly good work by the suprapubic route, condemned or partially rejected drainage. Some of them, he said, never learned and never would learn how to handle drainage well. After abandoning the suprapubic route, these men were placed in the uncomfortable position of admitting that drainage

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did what they had refused to do by suprapubic surgery. About all the reported operations were coming from operators opposing drainage or practising it only when they were compelled to do so.

### Tetanus Following Abdominal Section, Due to Infected Ligatures—The Angiotribe in Abdominal Surgery.

Dr. Walter B. Dorsett, of St. Louis, detailed at length two cases, which were of women who had undergone ventrofixation of the uterus, or adhesions of the uterus to the surrounding tissues, due to previous inflammatory conditions. The material used for fastening the uterus was kangaroo tendon. This was the source of infection. He had used the angiotribe successfully 25 times, as follows: abdominal hysterectomy, 10 times; hemorrhoids, 1; pus tubes 5 times; extrauterine pregnancy, 4 times; dermoid cyst, 1; ovariotomy, 3 times, and one in a case of vaginal hysterectomy. He concluded that (1) patients upon whom it had been tried suffered less post-operative pain; (2) no adhesions to stumps had followed; (3) no secondary hemorrhage had followed; (4) it can be applied, when two instruments were used, alternately by the operator and the assistant without the fear of the slipping of a ligature knot, and in less time.

### Ruptured Pus Tubes.

Dr. Charles Greene Cumston, of Boston, spoke of two methods of dealing with pus tubes; one by posterior colpotomy, followed by incision and drainage of the sac, while the other was to remove the tube, and if the condition was bilateral to do a total hysterectomy. Drainage of the perforated pyosalpinx through the vagina was naturally the easiest and least dangerous method. The vagina was incised, and then the pyosalpinx and the walls of the pus tube might be united to the vaginal wall by means of forceps. The best treatment for perforated pus tubes is by abdominal incision. The extirpation of perforated pyosalpinx is particularly urgent in those patients in whom drainage by posterior colpotomy had been unsuccessful, and also in tuberculous lesions of the tubes.

### Pelvic Abscess and its Treatment.

Dr. Herman E. Hayd, of Buffalo, spoke of a class of cases in which vaginal incision and drainage, supplemented by curettage, should be first employed to eliminate the pus, and then an abdominal section should be done later to relieve the patient of her suffering. Large collections of pus, low down in the pelvis, in a moribund woman are best evacuated through the vagina. He spoke in reference to strong women who were suffering

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from acute streptococcic infection, who had high temperatures with great pain and tenderness, and under ordinary circumstances ready to submit to major operations, and in whom an acutely tender mass could be felt low down in the pelvis on one or both sides, at times filling up the cul de sac of Douglas. For these, early vaginal incision was imperative and was without danger. The mass would diminish in size; the danger of rupture would be minimized, the pain and symptoms would subside.

**Starvation Treatment for Appendicitis Irrational.**

Dr. John B. Deaver, of Philadelphia, said his experience of ninety-eight cases for two and a half months past had furnished the objections to the rest or starvation treatment. An early operation, preferably in the stage of appendiceal colic, was the only rational procedure he had found, and was the best treatment to reduce the mortality in acute appendicitis. The so-called rest treatment failed to check inflammation of the peritoneal structures and in the majority of cases did harm to the patient. The statistics he presented supported the argument. He was willing to grant that operation in the presence of an acutely inflamed general peritonitis was attended by great risk to life, and therefore it was often wise to defer operation, hoping that the inflammatory process would become localized. This was often his practice; but the starvation plan of treatment promised no more in such cases than the mere common practise of abstaining absolutely from giving opium, keeping the bowels freely open by cathartics, or, as some physicians preferred, a hydragogue cathartic, which was both antiseptic and germicidal, giving nourishment by the rectum, when the stomach was intolerant, and using ice or heat locally in the shape of poultices or hot turpentine stupes.

**Presidential Address.**

The subject was "Our Shortcomings: Let Us Reason Together," delivered by Dr. Edwin Ricketts, of Cincinnati.

**Four Cases Illustrating the Difficulties of Diagnosticating Appendicitis.**

Dr. William Wotkyns Seymour, of Troy, reported these cases in abstract. Case 1 had previously been operated upon for appendicular abscess. He found a suppurating solid tumor of the ovary. Temperature at the time of operation was 107°; pulse, 180; recovery. Case 2 was a woman with contracted pelvis delivered of a dead child. Twelve days later there were symptoms of inflammation in the right iliac fossa, appendicular or tubal, the result of infection. Operation revealed a sup-

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purating gangrenous fibroid of the right anterior uterine wall, which was enucleated, followed by recovery of the patient. Later he did Cesarean section on this patient; mother and child well seven weeks after operation. In case 3 he was summoned to a case of appendicitis some fourteen miles distant in the country. His diagnosis was ovarian cyst with twisted pedicle. The mass had increased twofold since his previous visit to the attendant. Removal of the cyst was followed by recovery of the patient. Case 4, woman, single, age about twenty-two. Pains and intense tenderness in appendicular region began with joint pains. Examination of lungs showed bronchial breathing at left base; the next day diffuse bronchial breathing over both lungs. Appendicular symptoms less marked. Toxemia of some sort; no appendicitis.

**Intrauterine Fibroids Complicating Pregnancy, and Retained Placenta Associated with Intrauterine Fibroids Complicating Pregnancy.**

Dr. M. A. Tate, of Cincinnati, collected thirty-nine cases from literature, and reported two personal experiences. Analysing these forty-one cases, he showed that in nine cases the names of reporters were given. In six the tumor became gangrenous; hemorrhage was a prominent symptom, occurring in eighteen cases; three polyps were expelled spontaneously; seven polyps were removed; in three the polyp was not removed; in ten labor was normal; in four labor was difficult; in two the child was destroyed; one was a case of turning, and the other a breech; in four the tumor was discovered before labor, in all of the rest, afterward; four cases were reported in which labor set in before time; two were at the fifth, and two at the seventh month. The following complications were reported: septicemia, eight; measles, one; puerperal mania, one; retained placenta, four cases. Cold applications, iodides, ergot, whiskey, vinegar, packing of uterus with gauze, and removal of tumor. Causes of death: hemorrhage, three; sepsis, three; peritonitis, one; and collapse, one, making in all eight cases. If all of the other cases, including the nine without histories, recovered, there would be thirty-three recoveries and eight deaths, a mortality of 19½ per cent.

**Abdominal Section During Pregnancy.**

Dr. J. Henry Carstens, of Detroit, had had the following complications of pregnancy: Appendicitis, five; hernia, one; fibroids, four; abdominal hysterectomy, one; vaginal hysterectomy, three; ovariotomy, three, and miscellaneous three, or altogether, twenty cases and five deaths; mortality, 25 per cent.

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This included all his cases for many years back. To-day he thought the mortality would be less. Acute diseases which required prompt operation could be operated upon notwithstanding pregnancy. Tumors that would interfere with labor should be operated on. Tumor above the brim of the pelvis, or which could be shoved above the brim of the pelvis, need not be interfered with; still, as a rule, all tumors took on a very rapid growth during pregnancy, and the increase in size might interfere with the various functions of life and then surgical intervention was required.

**Deciduoma Malignum.**

Dr. Lewis S. McMurtry, of Louisville, reported a case. Speaking generally from a clinical standpoint, the disease presented a well-defined history. The disease appeared after abortion or labor, the tumor being situated upon the endometrium of the body of the uterus. Of 128 recorded cases, in 40 per cent. the disease appeared after mole pregnancy. Hemorrhage was the first and most conspicuous symptom, and was not controlled by curettage. The discharge was usually offensive, especially in the advanced stage. The disease had a marked tendency to early metastasis; the lungs and vagina were the most common sites for metastatic deposits. The disease was so rapid in its course that the period from first symptoms until the death of the patient was only a few weeks or months. The only successful treatment was the early and complete extirpation of the uterus. In the author's case the disease appeared in a woman of thirty-five immediately after abortion. Persistent hemorrhage and fetid discharge from the uterus prompted operative intervention. The uterus and its appendages were removed by abdominal hysterectomy, and the patient made a prompt recovery.

**Perforating Ulcer of the Duodenum.**

Dr. John B. Murphy, of Chicago, reviewed the etiology, pathology, and diagnosis of duodenal ulcers, and considered the surgical treatment of perforation. He also gave an analysis of twenty collected cases. The diagnosis of perforating ulcer was difficult, or, practically impossible without an exploratory laparotomy. In many cases there was no evidence of duodenal disease previous to the perforation. The most important physical sign, in addition to those of perforative peritonitis from perforations in other portions of the intestinal tract, was the flatness of the superficial piano percussion note in the right hypochondrium. The leucocytosis in one case, the only one in which it was seen, was pronounced, showed an inflammatory condition, in contradistinction to the usual absence of it in intestinal obstruction and fat necrosis of the pancreas. Leucocy-



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tosis, however, was not a necessary manifestation of perforation or of inflammation. It was often entirely absent in typhoid perforations. Collapse was absent in duodenal perforation except when associated with severe hemorrhage. In all cases of perforated peritonitis operation should be done at the earliest possible moment after the perforation, and experience showed that the mortality was in direct ratio to the length of time that elapsed between the perforation and the operation. Of thirteen cases operated upon more than thirty hours after perforation, all terminated fatally, while in twelve cases, where less than thirty hours had elapsed, 66⅔ per cent. recovered. The operation must be complete—that is, it must be pursued to an effective suture of the perforation. Drainage was insufficient, as of eighteen cases treated by drainage alone, all died. The suture of the opening can be easily inserted, as in 98 per cent. of the perforating ulcers into the peritoneum the opening was in the duodenum, its most accessible portion. Where duodenal perforation was suspected, the incision should be through the right rectus muscle. It could then be carried upward to the costal arch, or downward to the symphysis pubis without dividing any of the transverse muscles. The incision through the rectus muscle was the one which he commonly made in operating for appendicitis. It could be enlarged upward or downward without interfering with the muscle fibres.

**Peritoneal Tuberculosis.**

Dr. Rufus B. Hall, of Cincinnati, maintained that tuberculosis of the peritoneum in women is not a rare affection. It occurs often enough to make it necessary to consider it in the differential diagnosis of all obscure diseases in the pelvis and abdomen. In a large majority of cases there were no appreciable manifestations of tuberculosis in other parts of the body. The symptoms simulated several other conditions in the pelvis and abdomen. The diseases most likely to be confounded were the recurrent attacks of appendicitis of the catarrhal form, small fibroid tumors, with old tubo-ovarian disease, and recurrent attacks of pelvic inflammation. If the case is one of tuberculosis, however, the temperature chart will suggest this disease if the record is taken every four hours for a period of ten to fifteen days. In no other condition is there such exact regularity in the afternoon rise of temperature. Cases of tuberculosis of the peritoneum in which there was encysted dropsy, or an accumulation of pus or serum, should be operated on; after the necessary surgical repair the abdomen should be drained. Vaginal drainage in women is preferable, because it gives perfect drainage and prevents ventral hernia.

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## Surgical Treatment of Perforated Gastric Ulcer with General Infection of the Peritoneal Cavity.

Dr. H. Howitt, of Guelph, Ont., said that acute perforation with general infection of the abdomen, was usually caused by the acute, round ulcer, but might occasionally take place in the course of a chronic ulcer, especially when it was situated on the anterior wall. All the phenomena of acute perforation might result in either form of ulcer in a more indirect manner by the formation of a localized abscess, which afterward ruptured internally. In peritoneal perforation with general infection medicinal remedies are useless. Early, bold and thorough surgery alone can save the patient. When patient is anesthetized an incision from ensiform cartilage to pubis should at once be made, the bowels eviscerated and protected, then the stomach examined and the perforated part brought out of the wound as far as possible and the field guarded by sponges. The perforation might be excised, but it is generally merely closed with two or more rows of silk sutures. Every pouch and corner in the abdomen should be thoroughly inspected and flushed clean. Drainage tubes are used, not placed in the wound, but through stabs, one at the back in each flank depression below the kidney, and one in the lower abdomen to the right or left of the incision for the pelvis. After the intestines are replaced and omentum is spread over them and fastened below the lower end of the wound with a suture or two, the incision is closed as quickly as possible and dressed. In a desperate condition of the patient, a pint of peptonized milk or other suitable liquid food may be injected into the jejunum during operation.

The author said in conclusion that he was aware that many surgeons strongly objected to evisceration, but he maintained that it was impossible by any other known method to make certain that the cleansing of the peritoneum had been done thoroughly. Imperfect toilet is followed by more shock, and is vastly more dangerous than hours of properly managed evisceration.

Papers were also read by Drs. C. L. Bonifield, of Cincinnati; F. F. Simpson, of Pittsburg; Walter B. Chase, of Brooklyn; J. J. Williams, of Philadelphia; A. Goldspohn, of Chicago; Miles F. Porter, Fort Wayne, and L. H. Dunning, of Indianapolis.

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# Progress of Medical Science.

## MEDICINE.

IN CHARGE OF W. H. B. AIKINS, T. M. McMAHON, H. J. HAMILTON, AND INGERSOLL OLMSTED.

**A Case of Syphilis Complicated by Diabetes Mellitus**—By DOCTOR LINGI MOSCA.

Having had the opportunity of treating, under Prof. Tommaso De Amicis, a woman suffering from constitutional syphilis complicated by diabetes mellitus, in whose case there appeared a distinct relation between the two diseases, I have thought it worth reporting.

S. C., 40 years of age, was a married woman, belonging to Naples. Her father died at the age of 45 of heart disease, and her mother at 50 of *diabetes mellitus*. Two sisters and a brother are healthy. She began to menstruate at 15, and was married at 22. She had only one child, a son, still living, and possessed of a good constitution. Up to 1897 she enjoyed good health. In October, 1897, being with her husband in Calaboia, she began to feel poorly, complaining of wandering rheumatic pains and of constant cephalalgia, more intense at night. These symptoms, not yielding to various drugs, continued to become more severe, so as to keep her from sleeping. Some months later there appeared a general cutaneous eruption, chiefly pustular; and at a later period iritis in the right eye. She came to Naples to consult Prof. De Amicis, who diagnosed a typical constitutional syphilis and advised specific treatment, giving the preference, owing to the gravity of the symptoms, to the hypodermic injections of the sublimate. Under this treatment she quickly improved, the pains disappeared, and later, about one month, the iritis and the syphilodemia.

After an interval of 70 days, the woman, who up to this time had been rather fat and robust, began, without appreciable cause, to lose flesh and to suffer from general fatigue, notwithstanding abundant nourishment. Examination of the urine by Prof. Arena, revealed the presence of diabetic sugar in the proportion of 30 grammes per litre. She was put under the usual alimentary treatment, but in two months analysis of urine showed that the sugar was increased to 33°/₀ in spite of the restricted diet. Emaciation progressed; the general prostration continued; disturbance of the digestive tract showed itself by anorexia, slow digestion and lessened assimilative power. This was followed by a relapse of the specific symptoms (pustular

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syphiloderm, less confluent than before, with iritis in the left eye). Subjected again to the treatment by sublimate hypodermically, with the internal administration of sodium sodide in progressive doses, without omitting the special mixed diet, there was observed an improvement not only of the syphilis but also of the diabetes. The sugar rapidly diminished; digestion and assimilation improved, and after two months of rigorous treatment, not a trace of sugar was found in the urine.

Some months later the specific symptoms reappeared (intense headache, with periostitis of the tibia in both legs), together with the digestive troubles and a marked weakening of the sight of the left eye. Analysis of the urine showed again sugar, 20 grammes per litre. The injections of sublimate were repeated, with the internal iodide treatment, and after a month and a half she was again completely relieved, and the urine was free of sugar.

The following year, after an interval of several months, she again became ill, with similar symptoms. This time the gastro-intestinal condition was more severe, being accompanied by serious fermentation and high fever, so that it was feared she would not recover. After the fever fell, the energetic specific treatment was resumed with similar happy results.

These relapses of the syphilitic phenomena recurred from time to time, always associated with diabetic crises and digestive disturbances. These attacks always yielded to the same treatment, and there was never the slightest indication of mercurial intolerance.

The question of the relation between syphilis and diabetes is still a doubtful one. The cases of diabetes in which one can with certainty assert the exclusive and direct influence of syphilis are very rare.

In 1860 Lendet published an important paper on "Cerebral Syphilis with Diabetes." Later, Frerichs, in 1861, reported two cases of diabetes with syphilis. In 1865 Prof. Jacksh, of Prague, in an article on syphilitic convulsions, dealt with the possible existence of a specific diabetes, which would explain the good results attributed by Scott, Franck and Van Hoven, to the use of mercurial preparations in some forms of diabetes. Lecorché, in his treatise on diabetes in 1877, confirming the possible existence of diabetes as a manifestation of specific infection, thus expressed himself: "One cannot any more dispute the existence of syphilitic diabetes than that of gouty diabetes." A case of syphilitic diabetes was reported by Deker in 1889. Jullien gave it as his opinion that we cannot doubt the existence of an early syphilitic glycosuria, independent of the nerve lesions, which, at an advanced period of the disease, can give rise, secondarily, to sugar in the urine.

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On the contrary, several authorities exclude such an influence. Cantani, in 1876, asserted that in many cases of specific cerebral lesions, there existed no diabetes. Maurice said: "In spite of the authority of pathologists, I consider the pathogenic influence of syphilis on diabetes very doubtful."

In the case reported above, the influence of syphilis on the evolution of the diabetes was perfectly clear. The mechanism of the production is not easy to interpret. There existed in the patient general hereditary conditions predisposing to the development of glycosuria. There were also frequent gastro-intestinal disturbances, which became intensified during the exacerbations of the diabetes. Such a condition might be referred to changes in the secretions, especially those of the pancreas and liver; and it is well known that the altered function of these organs can, in predisposed subjects, cause diabetes. Evidently the general nutritive disturbance caused by the constitutional infection (given the hereditary predisposition), must have been the fundamental cause of the glycosuria, the powers of assimilation of the organism being notably diminished. The course pursued by the two forms of disease and the marked influence of the specific treatment on both, confirmed their direct relation, excluding the possibility of simple coincidence.—*Translated from Giornale Internaziona'e delle Scienze Mediche, by* HARLEY SMITH.

## OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD AND K. McILWRAITH.

### Use of Forceps.

In the St. Paul *Medical Journal* for August appears an article by Leavitt of the University of Minnesota. The writer propounds the question. "May we not safely use the forceps in every case?" His answer is, "The point I am to make is, that physicians *may* safely apply forceps in every case where time will permit, after the completion of the first stage of labor; that when this stage is over the obstetric movement has arrived where the patient may be placed in position and instruments employed with benefit."

We do not like the nature of this question. Physicians should not aim at demonstrating what they *may* do or what they *can* do, but rather at what they *ought* to do in the interests of the patient. We do not think that this end will be achieved by applying forceps at the end of the first stage in every case where time permits. Even for the most experi-

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enced the so-called high operations are more difficult, and fraught with more danger to both mother and child than the lower ones, and nature, for a time at least, may generally be given a chance with advantage to the patients.

Leavitt complains that in the matter of use of the forceps teachers are often not so conservative in their practice as in their teaching. We do not understand that Dr. Leavitt teaches his students to use the forceps in the manner he describes above, but we venture to hope not what Dr. Leavitt might do with impunity could scarcely be so done with tyros. We incline, however, to agree with the doctor in thinking that forceps may often be used to cut short labors, even though in process of time and nature they might come to a happy end themselves, and to believe that a better puerperium is often so brought about. K. C. M.

**Placental Transmission.**

In the Johns Hopkins Hospital reports, Vols. 3, 4 and 5, Lynch gives notes of three cases of typhoid fever in pregnancy.

In the first case the patient aborted about the 12th day of the disease, during the 5th month of pregnancy. Bouillen innoculated with liver and blood of the fetus gave cultures of the typhoid bacillus. The Widal reaction of the fetal blood was negative.

The second case gave birth, about the 40th diet day of the disease, to a child in the 36th week of gestation. The child lived 72 days. The Widal reaction of its blood was negative, and at the autopsy no micro-organisms were recovered from its tissues.

In the third case the patient aborted, during a relapse of typhoid, at six months. No autopsy was held, but the infant's blood gave a negative reaction to the Widal test.

In the paper a great deal of interesting information, culled from literature, is given as to placental transmission in other diseases.

**Accidental Hemorrhage.**

No part of the Rotunda system of midwifery has given rise to more controversy than the method of treating accidental hemorrhage. The following description of the method is taken from an article by Colclough, late Extern Maternity Assistant, Rotunda Hospital, which appears in the August number of the *Jour. of Obstet. and Gyn. of the British Empire:*

1. *Plugging the Vagina.*—Hastings Tweedy described the process in a paper, "The Vaginal Plug in Accidental Hemorrhage." The method in use at the present time differs a little

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from that employed when Tweedy was Assistant Master. The plugs used are small tampons of sterilized cotton-wool, about the size of a large walnut, hysol, creolin, and perchloride of mercury are the antiseptics used. After all the necessary antiseptic precautions usual for any obstetric operation have been taken, a catheter is passed, and the operator proceeds to plug. The patient is placed in the lithotomy position, and the fingers of the hand which was not used for cleaning the vulva, etc., may be used for plugging, and the other hand acts as a speculum. The plugs are taken out of the solution separately; the first one is placed in the posterior forvix, and the fornices are packed with a fair amount of pressure. Each plug is put in with a purpose to form a ring around the cervix, and packing is continued systematically downwards until no more can be introduced into the vagina. The operator then takes a large strip of iodoform gauze and places it over the plugs, which will be projecting from the vagina, instructing an assistant with clean hands to hold the gauze in position while the binder and T bandage are put on. The iodoform gauze is not always used, but the author has found it of great practical value.

No anesthetic is necessary; it will only be required if the patient is very restless, and it is a remarkable fact how little is necessary to render the patient quiet—merely a few whiffs.

2. *Application of the Binder and Perineal Bandage.*—The binder should have been placed under the patient before the plugging, etc., was commenced. It is now brought down into position, while the patient is swung round into bed. Strong pins and a stout binder are needed. The first pin must be placed above the fundus, as near to the ensiform cartilage as possible, and the binder secured extremely tight downwards as far as the symphysis. Lastly, the perineal bandage is put on, pinned well up the binder in front, three couples of pins being required. The patient is then rolled over on to her side, and the bandage secured at the back in the same way, the assistant keeping up steady pressure with his hand on the iodoform gauze. The plugs are thus kept in place until thoroughly secured by the tight perineal bandage. In this manner pressure is made on the front of the uterus and abdomen by the tight binder, and the uterus is forced downwards as well as on to the firm mass of plugs. The abdomen and abdominal veins will also be compressed.

Many interesting cases are cited, and a comparison made between this and other methods of treatment. We consider the method a good one. K. C. M.

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# OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN AND J. O. ORR.

## Injury to the Eyes of Children While Learning to Read.

C. J. Swan (*The Clinique* abstracted in the *Medical Review of Reviews*) believes that the eyes of children are injured by learning to read at too early an age. Five and six years of age is when many children learn to read. At that age the eyes, like the remainder of the body, are not developed, and the strain upon the ciliary muscle in accommodation is much greater than later in life. A greater effort in convergence also is necessary, since the refractive condition of early childhood is normally hypermetropic of greater degree than that at puberty. There is still another way in which the young child's eyes are strained more than those of an adult in reading. An adult glances at a word, a line, a sentence, and comprehends the meaning at once from the general appearance and arrangement of the letters, while the child in order to read a sentence must study closely each letter of each word, just as the adult would be obliged to do were he reading a foreign language written in unfamiliar characters.

After a child begins to read, teachers study the forcing of young minds as horticulturists study the forcing of plants, but with much less wisdom and knowledge of the inevitable results. The child's undeveloped eyes are strained by overwork, the retina becomes congested, and headache and other asthenopic symptoms are complained of in many cases, but not in all, since the eye of the child is often harmed without causing him to complain of strain which would be intolerable to an adult. On account of lack of exercise and outdoor air, the appetite and digestion of many young children are poor, and their entire bodily physique is weakened at the expense of over stimulating their mentality. Not only is the eye injured by excessive use with the consequent production of myopia and astigmatism, but the brain is forced into a precocious exercise of its functions at an age when it is too weak and undeveloped to escape harm. There results in many cases a nervous irritability which is analogous to the nervous prostration of overtaxed adults. In fact, it is a question whether many cases of adult nervous prostration are not due to over strained brain and nerves in childhood as primary causes.

In this connection Dr. Swan quotes Herbert Spencer as follows: "The brain, which during early years is relatively large in mass but imperfect in structure will, if required to perform its functions with undue activity, undergo a structural advance which is disproportionate to its age, but the ultimate

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effect will be a falling short of the size and power that would else have been attained. And this is probably the chief cause why precocious children who, up to a certain age, were carrying all before them, so often stop short and disappoint the high hopes of their parents."

Dr. Swan concludes his paper with the following recommendations:

1. The child to learn to read not until at least eight years of age.
2. No reading outside of school hours until eleven years old.
3. Select the sort of reading for recreation which will excite the growing brain least while being sufficiently interesting to hold the child's attention. There are such books.

The author does not mean to say that all, or even a large proportion of children, are materially affected by the present forcing methods of education. Nature stands much abuse with the help of inherent vitality and hereditary powers of recuperation. But it is the weak and enfeebled child who suffers by this vicious system. The boy who is too full of mischief or too lazy to study will probably escape lasting injury. Most children live fairly normal lives; it is the nervous and irritable child who is the precocious product of a forced mentality, and these children early haunt the offices of the oculist and neurologist.

**Causes and Treatment of Glaucoma.**

In the *Ophthalmic Record* for October, 1902, Prof. W. Schoen' of Leipzig, Germany, has an article which runs entirely counter to the accepted ideas in regard to glaucoma. The common theory in regard to this disease starts with the supposition of high tension in the affected eye, while the common treatment may be summed up in one word—Iridectomy.

Schoen says: "The first to mention increased tension as one of the symptoms of glaucoma seems to have been Plattner."

Afterward Albrecht von Graefe declared this symptom to be the cause of all the others in real glaucoma, excluding an *amblyopia cum excavatione* which he did not believe to be caused by increase of tension. However, when Donders asserted that the amblyopia must also be looked upon as glaucoma, von Graafe extended his theory to cover this form also. The adherents of this theory grant that in a very great number of cases no increase of tension has been observed. Some years ago the President of the American Ophthalmological Society stated that he was accustomed to diagnose glaucoma in the absence of increase of tension, and that it was recognized by all that increase of tension was not a necessary symptom of glaucoma.

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This fact is explained by the adherents of the tension theory on the ground that the examinations were made during the intervals of increased tension.

According to these data a definition of glaucoma simplex would read: Glaucoma simplex is a form of glaucoma in which the tension occurs always during the absence of the surgeon! If the patient could but live in the presence of his surgeon he would never suffer from an attack!

The theory was supposed to account for the cupping of the optic nerve. But as a matter of observation the deepest cuppings are frequently found in cases which show absolutely no increase of tension, and *vice versa*.

The origin of iridectomy as a remedy for glaucoma is not clear. Evidence is lacking that the iris has anything to do with the tension of the eye, and if iridectomy is expected to relieve the glaucoma by lessening the tension, what effect would it have in glaucoma without increased tension?

Iridectomy was exploited as a sure preventive of blindness. Of three hundred glaucomatous eyes under my care (says Schoen), forty-five had already been operated upon by others, and all were completely blind, although every patient had been promised preservation of existing visual acuity.

For the first twelve years of my work in ophthalmology I was a sincere adherent of this theory and applied it repeatedly.

But Dr. Javal's two cases of glaucoma, which were iridectomized with perfect technique, became totally blind. These cases caused my first serious doubt of the efficacy of the procedure, but it was fully five years later before I finally succeeded in ridding myself of my prejudices in favor of the method.

It is quite easy to recognize the premonitory signs, not only of glaucoma simplex, but also of the other forms of glaucoma. Increase of tension must be relegated to the rank and file of glaucoma symptoms.

In 1884 I stated that 80 per cent. of glaucomatous eyes were either hypermetropic or astigmatic; 13 per cent. afflicted with insufficiency of the recti-interni, and the remainder presbyopic, and I quoted many cases where the progress of glaucoma was checked by correcting these errors. Since then a number of cases have been reported by others, showing cures made by the same means.

Now, looking back over the histories of three hundred cases of glaucoma afore-mentioned, I repeat with conviction, that every eye can be guarded against glaucoma if it can be seen early enough by an ophthalmologist who is accustomed to observe the preliminary symptoms. When fully developed it is absolutely impossible to cure the disease by any known method.

J. T. D.

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# Editorials.

## DR. ADOLPH LORENZ.

Dr. Adolph Lorenz is a native of a small Silesian town, a graduate of the University of Vienna, and after graduation was privileged to work under those masters of surgery, Billroth and Albert. Anyone knowing the thoroughness of German or Austrian assistant's training, knows that his foundations must be laid wide and deep. Thus was Lorenz prepared for the very brilliant and scientific work he has since done in orthopedic surgery, and particularly in the study of the pathological anatomy and treatment of congenital dislocation of the hip.

If we were to judge solely by the utterances of the daily press of the United States, we would be inclined to characterize him more or less of a charlatan. In the eyes of the profession here, the hysterical reports, and the half-page cuts of these newspapers place him in a very unenviable, and to a greater or less extent the surgeons who entertained him, in a very undignified position.

We cannot but feel that, if he is reported correctly, he should have more guardedly expressed himself to the sensation-loving reporters, for no matter how great an enthusiast he may be, he could scarcely be justified in saying, as he is reported in one interview, that the case upon which he had just operated would be a perfect result, not only as to position but as to function and weight-bearing. None knows better than he that it will be months after he has returned to his own side of the Atlantic before it will be determined whether or not the result will be satisfactory.

We can, however, hold Professor Lorenz responsible for only the smallest part of the excitable presentation of his work through the press. There were at least two other factors which contributed to it. First, the fact that he was called from Vienna to examine and operate on the daughter of a multi-millionaire; second, the fact that reporters were evidently admitted to the clinics and probably supplied with information of a technical character by some of the medical men

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present. The first factor was under nobody's control, but the second was controllable and the medical men in charge should be held responsible.

Some members of the profession are uncharitable enough to say that this "playing to the gallery" is characteristic of orthopedists, as some of our own papers contained what looked like an inspired statement concerning a patient who was treated here and afterwards taken to see Lorenz.

In spite of the fact that we cannot sympathize with the *heroics*, we recognize the fact that Lorenz, by his enthusiastic following up of the subject, has placed us in a position to treat with a large degree of success what was until recently a hopeless and helpless deformity.

Whether the *bloodless* method will supersede all other methods is possibly doubtful, for many orthopedic surgeons are finding that cases which are impossible of reposition and retention by the bloodless method are curable by the open method, splitting the joint capsule, or even enlarging the acetabulum if necessary.

The cases operated on by Lorenz during his visit were not taken indiscriminately as some are led to suppose, nor were they cases which baffled American surgeons, but were selected cases with what was considered a hopeful outlook.

This visit to America will doubtless do much good in other ways than by the direct relief it brings to those operated upon. It ought to stimulate orthopedic surgeons to greater endeavor to satisfactorily handle this class of cases. A greater good, however, should be apparent in the stimulation given the general practitioner to make early diagnosis, as it is only in the early cases that the best results may be hoped for.

## LORD LISTER'S JUBILEE.

We in Canada are enthusiastic admirers of Lord Lister. We learned to respect him many years ago; we learned to love him when we saw him during his visit to us in 1897. He completed his fiftieth year as a member of our profession last month. As Mr. Howard Marsh tells us in his Bradshaw Lecture on infective arthritis, delivered before the Royal Col-

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lege of Surgeons, England (*Brit. Med. Jour.*): "On December 9th, 1852, a certain candidate passed his examination and became a Fellow of the College. He came from Essex, and his name was Joseph Lister."

The Lister Jubilee number of the *British Medical Journal*, December 13th, is an exceedingly interesting one. It contains a number of valuable papers contributed by distinguished foreign surgeons "in honor of the man who is revered by the surgeons of the whole world," and also "the testimonies and appreciations of men who saw Lister's work and its first beginnings, and closely followed its triumphal development."

Lord Lister graduated B.A. in 1847, and M.B., 1852, University of London. During his student life he worked faithfully in the laboratories, carrying out original investigations in physiology and pathology. He was also active in the hospital wards, and was one of the first house surgeons under the late Sir John Eric Erichsen. After graduating, he went to Edinburgh, where he continued his researches in physiology and pathology. While in that city he became closely connected with the late Professor Syme. He was appointed Regius Professor of Surgery in the University of Glasgow in 1860, and did much of his earlier work in connection with antiseptic surgery in the Royal Infirmary of that city. His work in Edinburgh and Glasgow made him famous, and in the latter part of 1876 he was induced to go to London and take a position on the staff of King's College Hospital. He entered on his duties there with the distinct understanding that he was to have complete seclusion of his own wards, with a house surgeon and nurses completely under his control.

One of Lister's greatest achievements was his conquest of London. It was quite a simple matter to capture the greater part of Europe and North America, but it was quite different in regard to the metropolis of England, whose surgeons are slow in showing their appreciation of any one coming from Birmingham, Glasgow, or Edinburgh. However, as Mr. John Wood told us years ago: "Lister continued to work with earnestness and zeal, and gradually but surely gained ground until he finally triumphed, to such an extent that he practically overcame all opposition. His uniform kindness and courtesy towards his opponents did much to secure this happy condition of things."

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## THE TREATMENT OF INEBRIATES IN ONTARIO.

The proposed legislation for the treatment of inebriates in Canada, which was outlined in the JOURNAL last year and laid over by the Ontario Government, is coming up again this year, and will doubtless become law. All the large Medical Associations in Canada, also the Prisoners' Aid Association have endorsed its provisions and urged it to be passed.

The bill, in brief, provides for the following: "(1) Placing all cases of drunkenness, except the confirmed jail 'rounder,' experimentally on probation on suspended sentence, and under the supervision of a probation officer. (2) Imposing a fine and permitting the fine to be paid by instalments to the probation officer. (3) In cases in which the inebriety has become a disease, the probation officer be given authority to place the dipsomaniac for a few weeks' treatment in a cottage hospital, or in an inebriate department in a general hospital. (4) The cost of treatment to be considered as a loan, to be repaid after treatment and while still on probation. (5) Cases of able-bodied inebriates, not reformed or not reformable by these simple and inexpensive methods, to be sentenced to prison on cumulative sentences. (6) Old and feeble confirmed inebriates to be provided for in county or city poorhouses. (7) A special per capita Government grant made to hospitals to promote the treatment of dipsomaniacs. (8) A medical officer appointed by Government to organize inebriate wards in general hospitals, and special cottage hospitals for the treatment of dipsomaniacs in Ontario where such hospitals are necessary, to provide for and supervise the medical treatment in said hospitals, and also to provide for home medical treatment for probationers in proper cases. (9) Three physicians of standing in the province to be appointed as a committee of consultation to co-operate (without salary) with the medical officer."—*From the "Quarterly Journal of Inebriety," October, 1902.*

This bill is practical and is evidently the result of a very thorough study of the inebriate, particularly of the means and measures found valuable in the care and treatment. This law will be no experiment. It has been tested in many of its provisions and found to be practical. While the general plan is new, it outlines the experience and conclusions of a large number of observers, and its success is simply a question of the men to carry out its provisions. The measure will practically solve some of the great temperance problems upon which so wide a division of opinion exists. The army of inebriates is increasing and the burdens from their presence in every community are becoming heavier; hence all students will welcome this new measure as the application of more exact measures and claims

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recognition of the means for care and prevention. Great credit is due to Dr. Rosebrugh for his untiring efforts in creating public sentiment in favor of this measure, and we are confident that this bill will lead all the world as a new economic movement to diminish the misery and crime which associate and follow alcoholic drinking. It is evident that measures of like character must be adopted by every state in the Union before they can successfully treat the drink problem.

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## THE QUARTERLY MEETING OF THE PROVINCIAL BOARD OF HEALTH.

Amongst the many matters of interest which engaged the attention of the Provincial Board of Health at its recent quarterly meeting was one of financial importance to the medical profession. Some people have got so accustomed to take for granted the charitable acts of medical men, that they often think the doctor should serve the public—the body politic—for nothing. Recently a medical practitioner was engaged to attend certain poor typhoid patients and safeguard the community by proper attention to their cases. The municipal authorities endeavored to shirk payment, and the matter came up before the Provincial Board. To any of our brethren who are similarly treated it will be useful to find that the Public Health Act contemplates the employment and payment by the municipality for the proper care of persons suffering from "smallpox, diphtheria, scarlet fever, cholera or typhoid fever." (Sec. 93 and others), and the authorization of two members of the local board of health is sufficient warrant. (Sec. 57 and others.)

It is a long time since we severed association with our friends the barbers, but boards of health have of late been taking up the question of the propagation of syphilis and other forms of contagious diseases by the armamentaria and medicamenta of the barbers. Another Provincial Board has been securing the cooperation of some of the leading members of the Barbers Association in providing for instruction and licensing of barbers, inspection of shops, the sterilization of their appliances and maintenance of aseptic technique. A conference was held with them at the office of the Board during its recent meeting, and the matter was well received. In many of the better class shops the same feeling is expressed.

During the whole summer and early autumn the bacteriologist of the Board, Dr. John Amyot, has been in Berlin, Ont., making experiments in connection with the sewage farm there.

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His report we will deal with more in detail in our next issue. Meanwhile, suffice it to say, observations of great value to the scientific world have been made. We all know how much we are indebted to the State Board of Health of Massachusetts for its admirable experiments at Lawrence, Mass. The work at Berlin will add much to our knowledge of the chemical change wrought in sewage by bacterial action in the septic tank, contact bed, etc. Lengthy tables are given of observations of the amounts of ammonia, free and albuminoid, in specimens taken hourly before and after treatment, and of the oxygen consumed, and valuable conclusions drawn as to the limitations of dosage and the capacities of bacteria at various stages and under varying circumstances. The effect of waste products of various industrial processes added to the sewage, and the nature of their substance and processes are also stated. The whole document will be published in the next annual report of the Provincial Board of Health.

Amongst the encouraging features of public health work were letters of congratulation from some localities on the successful stamping out of smallpox. From the reports of epidemics in some of the neighboring States the vigilance of the Provincial and local authorities deserves both to be commended and supported. The percentage of fatalities justifies the warnings made in one of the former reports of the Provincial Board.

A matter of serious consideration drawn at the recent meeting was the present status of the vaccination question, the apathy and neglect in the face of grave danger, and the opposition in some instances. Several circumstances conduce to the latter; the officious spoutings of superficial and vain-glorious cranks, and sometimes the single factor of a bad man in a community has been unreasonably and unreasoningly allowed to cancel all the unknown quantities of lives saved from death by the ravages of smallpox—unknown quantities, but fairly surmisable if we turn to the statistics of epidemics when vaccination has not been practiced. Apathy and neglect arise to a certain extent from the fact that in the absence of an epidemic in a locality, vaccination and its enforcement are not made the strict business of any person, and the family doctor feels that his motives may not be considered disinterested should he press the matter, and bovine vaccine is not as reliable as vaccine of older days. To mend these conditions the Board has in view the simplification of the Vaccination Act, and the making of more definite and reliable provision for vaccination. When the question comes before the profession and the public, it is to be hoped the medical men will discuss it with the Provincial Board, that we may all come to a harmonious conclusion and action.



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Various matters were discussed in connection with the typhoid which has been so prevalent. Very many practitioners in all parts of the Province have been availing themselves of the laboratory of the Board for obtaining the diagnostic aid of the Widal test, when the disease has been in a stage of uncertainty.

There are other matters, the consideration of which we must defer for the present.

## MEDICAL ITEMS.

On New Year's Day, at 10.30 a.m., Dr. Albert Ham, organist of St. James' Cathedral, with a number of the choirmen and boys, paid a visit to the Hospital for Sick Children, and sang Christmas carols and hymns for the children. It was a very beautiful song service, and the children were delighted.

The following graduates of the Training School for Nurses of the Toronto Western Hospital have been appointed as lady superintendents, or head nurses, of the following hospitals: Mrs. Annie Yorke, Orthopedic Hospital, Toronto; Miss Mabel Ireland, eye and ear section, Manhattan Hospital, New York; Miss Annie Inch, Stonega Hospital, Virginia; Miss Estella Gunn, Royal Alexandra Hospital, Fergus; Miss Pauline Ottaway, Aberdeen Hospital, New York.

St. Michael's Hospital is to have another new wing. For this purpose the two lots adjoining the hospital property on the north side have been purchased. The houses will be remodelled and used as the maternity ward, which at present occupies space upstairs in the south part of the hospital. The latter is needed for additional accommodation in the surgical department. Later, a building will be put up connecting the new maternity ward and the hospital proper. There are about 150 patients in the hospital at present.

The Board of Governors of the Toronto Western Hospital acknowledge the following donations for the benefit of the hospital: Mrs. McPherson, Stratford, $100; Mr. McNely, $5; Mrs. W. C. Tanner, $2; Mr. G. P. Magann, $100; Charles Cockshutt, $100; Beal Brothers, $5; Duntroon Camp, No. 107, Sons of Scotland, $3; Mr. Jex, $1; E. B. Osler, $200; the Wyld, Darling Company, $100; Dr. Hooper, $100; Dr. McKibbon, $100; Dr. Porter, $100; Dr. J. H. McFaul, $100; Dr. J. T. Clarke, $100; Dr. Allen Shore, $100; Mrs. Herbert Langlois, $10; Canada Printing Ink Co., $5.

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# Personals.

Dr. Archie Beecher, of London, visited Toronto, December 20th.

Dr. E. J. Murphy, of Metcalfe, spent his Christmas holidays in Toronto.

Dr. A. Fisher (Tor. '02) has settled in East York in the place of Dr. Webster.

Dr. R. A. MacArthur, of Chicago, spent his Christmas with his relatives in Toronto.

Dr. John A. Amyot paid a visit to Baltimore and New Orleans in the latter part of December.

Dr. Arthur A. Small's office address in Chicago is 100 State Street; house address, 575 East Division Street.

Dr. Augusta Stowe-Gullen returned to Toronto, December 12th, after a stay of some weeks in New York.

Dr. J. D. Webster (Tor. '98) has removed from East York to 232 Shaw Street, Toronto, the residence of the late Dr. J. M. Hart.

Dr. T. Harry Ashby (Trin. '78), after living in England for many years, has returned to Canada and commenced practice in Toronto, 133 Avenue Road.

Dr. A. A. Dame, formerly of Toronto, after practising for two years in Thornhill, has returned to the city and resumed practice, being now located at 19 Howland Avenue.

The readers of the *Practitioner* (English) are likely to regret deeply the decision of Mr. Malcolm Morris to retire from the editorial management of that able journal, as announced in the issue for December.

Sir William Hingston, of Montreal, delivered the chief address at the dedication of the new addition to Rush Medical College, Chicago, December 17th. The new building and its equipments came into existence chiefly through the generosity of Dr. Nicholas Senn.

Dr. Wm. W. Jones (Tor. '96), after practising for three years in Conn, Wellington county, went to London, England, where he was engaged in post-graduate work for nearly three years and passed his primary examination for the Fellowship. He returned to Canada early in December, and after spending a few weeks with his friends will return to England.

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# Obituary.

## ANGUS C. McDONNELL, M.D.

Dr. McDonnell, one of the leading physicians of Montreal, died January 2nd, aged 74.

## MRS. (DR.) C. K. CLARKE.

Mrs. Clarke, wife of Dr. C. K. Clarke, medical superintendent of the Rockwood Asylum for Insane, died of cardiac disease December 25th, aged 47.

## MR. MURRAY COHEN.

Mr. Murray Cohen (B.A., Tor. '99), of Toronto, a student in his fourth year in medicine at the University of Edinburgh, died of pneumonia, December 13th, aged 24.

## STANLEY SANFIELD CORNELL, M.D.

Dr. Cornell, of Athens, Leeds County, died of influenza December 2nd, aged 37. He graduated M.D., Queen's University, Kingston, in 1886.

## WILLIAM LINDSAY, M.D.

Dr. Lindsay died of apoplexy at his late residence, Strathroy, December 9th, aged 59. He graduated, M.D., Victoria University, in 1869, and became L.R.C.P., Lond., in 1873.

## DENNIS NUNAN, M.D.

Dr. Nunan, of Guelph, died December 12th, aged 64. After graduating at Ann Arbor in 1867 he spent two years in the Toronto School of Medicine. After completing his course he settled in Guelph, and continued to practice there up to the time of his last illness. He did a large practice, especially among his co-religionists of the Roman Catholic Church.

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## ALEXANDER YOUNG SCOTT, B.A., M.D.

The friends of Dr. A. Y. Scott were greatly surprised and shocked to learn on New Year's morn that he was ill, with little or no chance of recovery. His physician's fears were well founded, and death came on the morning of the 3rd. The immediate cause of death was endocarditis, following typhoid fever of two years ago. One week before he died he was seized with a fainting fit while delivering a lecture in the College of Pharmacy. This was the beginning of the end, as he never rallied sufficiently to give hope of recovery.

Dr. Scott was born in Stratford in 1861, and graduated B.A., Toronto, in 1882, and M.D., Trinity, 1887. After taking his degree in Arts he was for some years on the teaching staff of Upper Canada College. He became Professor of Chemistry and Botany in 1891 in the Toronto College of Pharmacy, and remained so until the time of his death. He took a deep interest in military matters, and went through the North-West Rebellion campaign. He took an active part in the establishment of the Field Hospital Army Service, and was a major of one of the companies.

## ANSON SOVERILLE FRASER, M.D.

Dr. A. S. Fraser, of Sarnia, died after a lingering illness from Bright's disease at his late residence, December 31st, aged 56. He was one of the best known and most highly respected physicians of Western Ontario. He was born in London and received his medical education in Kingston. He graduated M.D., Queen's University, in 1869. Soon after graduating he commenced practice in partnership with the late Dr. Bucke, afterwards Superintendent of the London Asylum for Insane. He was for nine years ('91-'99) Examiner in Physiology for the Ontario Medical Council. He was largely instrumental in the establishment of the Sarnia General Hospital in 1896 and was president of the Hospital Board until last November when he resigned on account of ill-health. His student days in medicine extended from 1865 until 1902. In this respect he was much like the late Dr. George A. Tye, of Chatham. In fact these two men resembled each other to such an extent that we can scarcely think of one without the other. Both were noted for their ability, industry, and modesty of a rare and charming sort.

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# Correspondence.

## MUSKOKA AND CONSUMPTIVES.

*To the Editor of* CANADIAN PRACTITIONER AND REVIEW.

SIR,—Neither time nor inclination have I had until now to notice the communication of Dr. Elliott in the PRACTITIONER of September, in respect to my remarks on Muskoka as unsuited for consumptives in your issue of August. Nor shall I now, for like reasons, enter into a continued correspondence on the subject. Kindly favor me, however, with space for a few sentences.

No salary is paid to nor advantage received, directly or indirectly, by me for naming as I did a few of the best localities for consumptives and giving my often asked for opinion of Muskoka.

"Had your correspondent studied the meteorological condition;" and "why did it not occur" to him "to look up the records," Dr. Elliott writes.

Let me inform him that it is not *my* practice to write of that of which I do not know; that I have, and am familiar with, all the meteorological reports of Ontario, and many others; and that almost before he was born I assisted in the preliminary work of getting that service established in Ontario.

It strikes me that many places, in about the same latitude and with about the same mean temperature, record a much lower percentage of humidity than almost 76, more than three-fourths of complete saturation, as given for Gravenhurst; indeed, not many places record so high, I think. However that may be, I gave the practical facts; though "fogs" were not mentioned in my communication.

And it appears to be well known that the late lamented Dr. Graham resigned his position as a trustee of the National Association when that locality was decided upon for their sanitarium, and mainly on account of its humidity, with, too, its want of elevation. Though afterwards the doctor consented to act for a time as medical adviser.

Respecting the results of the work in the sanitarium over which Dr. Elliott presides, I have no wish to write here. But if he will kindly excuse me, I shall have to decline to read his paper "showing marked improvement in 120 out of 155 cases in all stages" treated there, preferring, as I do, naturally, the "showing" of many isolated clinical facts.

In conclusion, permit me to refer especially to the last three words of the above quotation from Dr. Elliott's letter, as being

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most remarkable. He writes, "in all stages." Not long ago, one of the trustees of that institution, in a public meeting in this city, stated that their "charter" did not permit them to take any patients except those in the first stage of the disease, and that they kept strictly to the charter. This, too, is the unequivocal experience of many physicians here in respect to the rejection by the authorities of the institution of individual patients, hardly past the first stage, and not very ill: rejection of such patients who were able and ready to pay the "charitable" rates charged there, and when there was known to be vacancies, or room, in the Sanitarium.

Toronto, Ont. EDWARD PLAYTER.

# Book Reviews.

**The American Text-Book of Obstetrics.** In two volumes. Edited by RICHARD C. NORRIS, M.D.; Art Editor, Robert L. Dickinson, M.D. Second edition, thoroughly Revised and Enlarged. Two handsome imperial octavo volumes of about 600 pages each; nearly 600 text-illustrations, and 49 colored and half-tone plates. Per vol.: cloth, $3.50 net; sheep or half morocco, $4.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

This is a work for the student and practitioner alike. It makes clear those departments of obstetrics that are at once so important and usually so obscure to the medical student. The obstetric emergencies, the mechanics of normal and abnormal labor, and the various manipulations required in obstetric surgery are all described in detail, and elucidated with numerous practical illustrations.

Since the appearance of the first edition many important advances have been made in the science and art of obstetrics. The results of bacteriologic and of chemicobiologic research as applied to the pathology of midwifery; the wider range of surgery in treating many of the complications of pregnancy, labor, and the puerperal period, embrace new problems in obstetrics, some of which have found their place in obstetric practice. In this new edition, therefore, a thorough and critical revision was required, some of the chapters being entirely rewritten, and others brought up to date by careful scrutiny. A number of new illustrations have been added, and some that appeared in the first edition have been replaced by others of greater excellence.

By reason of the extensive additions the new edition has been presented in two volumes, in order to facilitate ease in handling.

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# Miscellaneous.

## The Open Air Treatment of Consumptives.

Not only, as Dr. William Murrell, of London, has expressed the opinion in regard to the open air treatment of consumptives, is this method "bidding fair to come under the baneful influence of routine," but there is a growing tendency to the adoption of measures in its application which are so extreme that they can not be too heartily condemned. "There is a mean in all things, but unfortunately some of the exponents of open air treatment seem still totally oblivious of the truth of this maxim. Patients who have active symptoms are being placed in open tents and especially constructed three-walled buildings (buildings with one side left open) and exposed to all conditions of weather in a way which is quite unnecessary and often harmful.

It is not our purpose to oppose out-of-door life in the treatment of phthisis. Much good is to be accomplished by the intelligent application of this method in properly selected cases, and the benefits of pure air and sunlight are self-evident. But in order to obtain pure air and sunlight it is not essential to resort to extreme measures. Pure air and cold air are not necessarily synonymous and, as every one knows, an abundant supply of pure air can be obtained in a properly ventilated, comfortably heated sleeping room. Besides, when patients are exposed to extremes of cold weather they must be kept warm artificially and this amounts to the same thing as the maintenance of a comfortable temperature in the sleeping apartment, except that in the first instance hardship and discomfort are added.

While in certain dry, salubrious climates, there is no objection to keeping patients out of doors at night, the proposition becomes a very different one in a rigorous winter climate. If we picture to ourselves a patient with active symptoms, high fever, night-sweats, etc, in an open tent, awaking in the midst of a cold winter night with, perhaps, the snow sifting in upon and about his bed and with his night-clothing damp or wet with perspiration, and if we consider that this patient is subjected to the choice either of lying in his damp garments or of incurring the exposure attendant upon rising to change them, his escape from the occurrence of complications in the way of severe colds, bronchitis, or pneumonic inflammation about caseous or necrotic foci, would seem to be a matter of providential dispensation, rather than an evidence of good management.

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It has been said that patients out of doors run a considerably lower temperature than when in doors, but presumably these observations relate to mouth temperatures. Inasmuch as the temperature of the mouth, or of the axilla, is influenced by that of the surrounding medium, the amelioration of fever, under such circumstances, is rather apparent than real. With even a normal or subnormal oral temperature that of the rectum will often be found three or four degrees higher in such patients.

Those who are making a fad of open air treatment and are resorting to extremes in its employment argue that exposure hardens the patient. This is not to be denied, providing that the latter does not succumb to the hardening process. Surely such methods are not suitable in active stages of the disease. If they can have any value whatever, it can only be in the nature of prophylaxis in cases in which the trouble is latent or arrested. Even then the hardening process should not consist in methods in which the patient can not or will not persist after his discharge from treatment. People have for countless generations dwelt in houses and the social conditions of a modern civilization indicate that they will continue to do so. They will not live in tents in all sorts of climates, and although the individual may have successfully been hardened by extreme exposures, a return to usual environments and mode of life will prove such means to have been worse than useless and of no avail as a protection in later years.—*The Journal of Tuberculosis.*

**Sentimentalism and Horses' Sun Bonnets.**

Truly, in these humanitarian days, it is not a little amusing to note how in many cases kindness is swallowed up in vapid unreasoning sentimentalism. There never was a more striking instance of this transformation than in the use of the sun bonnet for horses. It is true that horses die on hot days out in the sun, but it is equally true that they die on cold and wet days. In ninety-nine cases out of a hundred the poor brute dies of heart failure, induced by overwork. The majority of horses are overworked, both in speed, weight to be carried or drawn, and duration of hours of toil, to say nothing of their sufferings from hunger and thirst, the lash of the whip, the constant stoppages and restarting necessary in crowded traffic, and the torture of the bearing-rein. To put a sun bonnet on the head of this much-abused brute is a sheer mockery. There is no proof that any horse ever suffered from the effects of the sun's rays falling upon his head. Among the human race it is now a well-recognized fact that so-called "sunstroke" is due to a microbial invasion of the body; in other words, it is a

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kind of specific fever, and can be contracted in the shade. The Dumb Friends' League, an excellent society, might husband its resources by declining to pander to the last fad of unreasoning sentiment which decks out the horses in the streets with millinery grotesque and unsuitable enough to gratify the soul of the most foolish of feminine leaders of fashion.—*Medical Press and Circular.*

## The Doctor and His Health.

The death rate among physicians is relatively high, much higher than the average. This should not be so. True it is, that the busy medical man is subjected to unusual dangers, such as exposure to contagious diseases, and to the most trying weather of both winter and summer, as well as to unavoidable irregularities in his times of eating and sleeping. He is often tempted to bolt his food or leave a half-finished meal and rush off to a suffering patient, and not seldom may have little sleep for several nights in succession. He must frequently endure the strain of great anxieties, and become so exhausted at times as to beg the privilege of a few minutes' respite for sleep while on his rounds.

All these experiences tend, of course, to shorten the life of the busy physician, to wear out his vitality prematurely and hasten his end. Yet there is much to be said on the other side. In many respects the doctor, even the general practitioner, has advantages over the majority of his fellows, which properly employed, should and would raise the longevity of the profession to near the average if not above it.

Though he is exposed to deadly contagions, he knows better than others how to protect himself against them, and, in fact, it is comparatively rare that physicians succumb to such causes of death. Though his hours for eating and sleeping are frequently encroached upon, the doctor knows, or should know, that most men eat by far too much and that an entire meal can be omitted occasionally not only without harm, but with a gain to the organism by giving the digestive system a needed rest; also that the more temperately one eats and drinks, up to a certain point, the less sleep one needs. And while it is true that some excessively timid or sensitive physicians worry seriously over their critical cases, this is not the rule; the well-balanced men in the profession—and none others should be in it—meet their responsibilities bravely and calmly, not letting their anxieties or sympathies, however strong, run away with their judgment or disturb too much their equanimity.

Most specialists, it may be, are too much confined indoors, too sedentary, but general practitioners, who fortunately make up the great bulk of the medical guild, spend necessarily a very

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large share of their time riding or walking in the open air under good hygienic conditions, and know how to protect themselves securely against severe weather. Their many hours spent daily out of doors do much more to invigorate them and promote longevity than their occasional exceptional dangers from rough weather or periods of overstrain can counteract, provided always they live in other ways as hygienically as possible.—*Edit. International Med. Magazine.*

**Some Things not Learned on the Benches.**

Dr. Rockwell (*American Medicine*) gives some shrewd advice on various subjects. The following are pregnant sayings:

The most important thing in therapeutics is a knowledge of what not to do.

The most dangerous member of society is the doctor who never makes a mistake.

In medicine, more truly than in any other field of human activity, "all things are possible." It is well to bear this in mind.

He cannot obtain the highest professional success who only knows medicine.

Find out who "runs" the family, and then you "run" her—this discovery will prove of great value.

Administer medicine personally whenever possible. The dose you give has a higher curative potential than that administered by the patient's friends.

Never prescribe anything until you have perfectly definite and distinct reasons for so doing.

Don't blame your nurses for everything. They have some rights, and are not always conspiring to do your patient harm or put you out of the case.

Expedition in performance is almost as important as accuracy in performance. Do your work with precision and despatch.

Never "give up" a patient.

This last piece of advice deserves to be written in letters of gold. Sir James Paget strongly urged that even in the most hopeless-looking cases of cancer the practitioner should never merely fold his hands in despair. This simply makes medical practice the "meditation on death" which was imputed to some of the old Greek physicians. The doctor should dispute every inch of ground with the enemy, and should take as his rule of conduct an adaptation of an old saying, *Dum spirat spero.*

With regard to this point we may be allowed to relate an instructive story which, though it may have been told before, will bear repetition. A patient had an enlargement of the

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liver. Sir William Jenner, who was called in, with characteristic frankness pronounced the disease to be cancer, for which there was nothing to be done, and went his way. The friends thus left to struggle with a hopeless situation sought counsel of another oracle. Sir Andrew Clark was summoned, and after careful examination agreed that there was a tumor which was not indeed of a benignant character, but which, if not exactly curable, could be considerably alleviated by the resources of medical science. Sir Andrew continued to attend the patient till his death several months afterwards; and even if his life was not prolonged, it was certainly made much less burdensome to himself and to those about him by the physician's *savoir faire.*

Don't tell your neurasthenic there is nothing the matter with him; it is not the truth.

Another conveys a counsel of perfection which it is often quite impossible to follow in practice—

If you cannot tell a patient the truth, don't tell him anything.

Perhaps the most valuable of all Dr. Rockwell's maxims is the following:

Possess yourself of an irresistible, indestructible optimism. It is the keystone of the arch, success.

We are reminded of the story of Sir Richard Quain's professional *début.* When a young man he was taken by an experienced physician to see a serious case. Before entering the sick room he composed his features to a gravity which he thought appropriate to the occasion, but was at once rebuked by his mentor, who exclaimed: "For heaven's sake, man, don't look so funereal! The poor devil will think you are the undertaker!"—*London Practitioner.*

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FREE CONSUMPTION HOSPITAL.—The New Year season has brought to the trustees of the Free Hospital for Consumptives at Gravenhurst the following subscriptions: H. P. Dwight, $500; Jos. Lesslie, $300; E. B. Osler, M.P., $100; Walter Mann, $50; Dr. E. A. White, Kinmount, $50; The Patterson Manufacturing Co., $25; Park, Blackwell & Co., $25; Mrs. J. H. Mitchell, $25; J. A. Allan, Perth, $25; Bishop of Huron, $10; J. A. Graham, $10; Robert MacLaren, St. Catharines, $10; MacLaren & Co., Limited, St. Catharines, $10. The beneficiary societies in all parts of the Dominion are, with few exceptions, sending contributions ranging from $2 to $15 each. The Public and High Schools, Sunday Schools, and Church Societies have also been generous in their givings.

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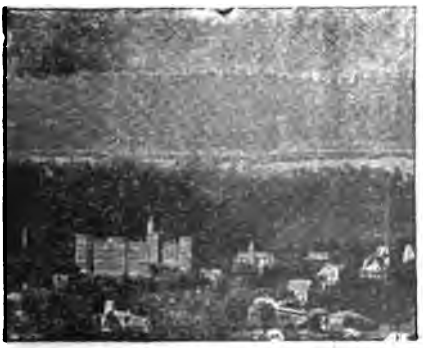

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THE general statutes of Connecticut permit narcotic and alcoholic patients to legally commit themselves for any period of time not exceeding one year. At Dr. Givens' sanitarium, Stamford, Conn., a cottage is devoted to the special treatment of such cases.

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HYPERTROPHIED PROSTATE WITH DIFFICULT MICTURITION.—For an old gentleman, seventy-four years of age, who was suffering from hypertrophied prostate with difficult micturition, I prescribed Sanmetto. The results were favorable, and after taking two bottles of Sanmetto he was so much improved as not to require the use of the catheter, which he had been compelled to use for several months previous, at least once in twenty-four hours. I have since prescribed Sanmetto in five similar cases with equally good results.

Keith, Ohio. E. C. CULBERTSON, M.D.

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**Guaiacol in Acute Gonorrhocal Orchiepididymitis.**

Alf. Bocchi (*Gaz. degli Osped*, March 16th, 1902) relates ten cases in which he used a 10 per cent. solution of guaiacol in vaseline. Suspending the treatment of urethritis, he smeared this on the scrotum once a day, covered it thickly with cotton wool, and supported it by a firm suspensory bandage and a cushion. Internally he gave salol (7½ gr.) or salicylate of soda (15 gr.) four times a day. He claims ease of application and lack of all discomfort, save slight smarting if the scrotal epidermis be abraded. The analgesic effects are excellent, the pain being eased from the first, especially in acute cases. The resolvent effect is very marked, complete cure taking only twelve or thirteen days. He does not recommend making the applications two or three times a day, though the cure may thus be hastened, for there is a risk of scrotal inflammation being set up. None of his cases were febrile, so he could not confirm the antipyretic effect of guaiacol reported by other observers. His conclusion is that no other treatment gives such good results.

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**Perineal Laceration During Forceps Delivery Prevented by Adhesive Straps.**

Adhesive straps have been employed by Noble (*American Journal of Obstetrics*, February, 1902) in six forceps deliveries with perfect satisfaction, using them in cases in which the perineum appeared to be in imminent danger. They were applied after the occiput had passed under the pubic arch and before the period of crowding was reached—that is, before the pelvic floor was very much distended.

After thoroughly cleansing the parts with soap and water and such antiseptic solutions as may be desirable, the perineum and buttocks should be sponged with alcohol to remove moisture. The application should begin with straps one and a half inches wide and eighteen to twenty-four inches long, attaching one extremity well upon the side of the labium and deep into the sulcus between it and the thigh, then passing downward and across the median line just behind the posterior commissure. It is continued on the opposite side round behind the buttock, and attached to the hip at or about the sacroiliac synchondrosis. The second strap is passed in a similar manner on the other side, each one to be applied with as much tension as possible, drawing the labium well downward and the buttock upward. The third strap passes horizontally across the perineum at a level with the posterior commissure, and is fastened on either side to the flexed thighs and hips. As the delivery proceeds the perineum will extend by stretching the skin beyond the edge of the straps, but chiefly by rolling the posterior vaginal wall out in advance of the head. When it has extended as much as one-half or three-fourths of an inch beyond the straps, or appears to be drawn tightly across the presenting parts, another horizontal strip of adhesive plaster is applied, which as a rule will be sufficient to complete the labor.

The straps take the strain off the perineum and change the direction of the presenting parts more or less forward to the normal or axis of the outlet by forcing it firmly against the lower anterior surface of the pubic bone, permitting delivery through a smaller orifice than can be effected when the head is delivered in the abnormal or axis of the bony outlet.

The straps are recommended for protecting the perineum, but not for preventing tears in the vagina above the perineum, such as are produced by disproportion and ill-constructed forceps or unskilled management of the latter.—*Therapeutic Gazette.*

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From the standpoint of the surgeon every attack of appendicitis leaves the patient in worse condition than he was before, because each one increases the number of adhesions, and makes subsequent operative work more difficult and hence more hazardous.

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, FEBRUARY, 1903. NO. 2

## Original Communications.

### RUDOLF VIRCHOW—AN APPRECIATION.*

BY CHARLES A. L. REED, M.A., M.D., CINCINNATI, O.
Former President of the American Medical Association.

The object of this address, the invitation to deliver which is an honor for which I am profoundly grateful, is to express, in some measure, an appreciation of the life and labor of Rudolf Ludwig Karl Virchow, a deceased Honorary Fellow of the Medical Society of the State of New York.

In approaching this task we become at once impressed with the fact that the influences which develop greatness are subjects of speculative inquiry not less interesting and important than the momentous question of what constitutes greatness itself. When, therefore, we for any reason examine into the facts relating to the evolution of a given historic character, we at once think of the conditions and forces concerned in its production—we think of ancestry, of domestic surroundings, of scholastic opportunities, of personal associations, and of the forces that were at the time dominant in the social, political and intellectual atmosphere. We are prone, also, as we turn to greatness itself, to measure it, not alone by the standard of its own time, not alone by the rule of personal achievement, but to estimate it with reference to both its immediate importance and its final influences. Thus, as we glance over the vista of history, and our fancy nestles naturally enough about the most imposing figures of the ages, we discover, for instance, that we would like to know more of John and Mary Shakespeare, who blessed mankind with the Bard of Avon—the man of sympathy; and we yearn for an acquaintance with the

*Delivered before the Medical Society of the State of New York at Albany, January 28th, 1903.



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farmer of Woolsthorp and his wife, who begat the illuminating genius of Newton—the man of mind. We feel, also, that full as are the annals, we would like to know even more of the actual political forces of the Roman Empire, directly concerned in developing the world's greatest soldier and statesman; that, notwithstanding its rich literature, we would like to feel the sentient throbs of the Elizabethan epoch that made possible the world's greatest poet and dramatist; that, voluminous as is the record, we would like to be more familiar with the trend of scientific thought during the century that followed and that produced the world's greatest philosopher. We search for the reason why each of these names has been engrossed upon the scroll of immortality, and as we search we discover that everywhere lies the unknown; that in atom and planet, in germ and genus alike, is law, natural law—inherent and integral—whose essence is not and cannot be of the record; that these men have delved and found and revealed laws—laws of war and statesmanship, laws of human emotion, laws of the natural universe—and that man is stronger and better and happier because they lived. We discover, furthermore, as we glance over that immortal scroll, that each name inscribed thereon has been placed there because its possessor, whether Pythagoras or Euclid, Copernicus or Kent, Galileo or Herchel, Hippocrates or Harvey, whether Dante or Goethe, each has been recorded because each has torn away the veil and revealed somewhat of the law that was hidden; for the law is in all, and of all, and he is the greatest among men who reveals the most of law unto man. In this spirit let us approach a discrimination of the great savant whose demise was the melancholy event in the medical, the scientific, and the political world during the last year.

The Second Peace of Paris had been signed but a few years when, in 1821, Virchow was born in the little hamlet of Schievelbein in the flatlands of Pomerania. The Baltic breezes that swept inland on that fifteenth day of October were not, however, sufficient entirely to cool the political atmosphere of that northernmost Prussian province, or, for that matter, of the thirty-nine petty States that then comprised the German Confederation. Napoleon's exile had terminated with his death at St. Helena but six months previously, and Europe—Germany in particular—relieved of the depressing shadow of his overlordship, was busying itself with the always serious problem of reconstruction. The intellectual world was not less perturbed than was that of politics. The great universities, then as now, exercised a powerful influence upon the trend of events. It was in them that the battle for constitutional rights, as a remedy against the despotism of the petty Princes,

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was waged with intensest vigor. A constitution had been granted and revoked in Wurtemburg; the Duke of Weimar had granted a constitution to his subjects, the celebration of which event, at Jena, had lead to patriotic demonstrations and to a revival of the influences of Luther's great struggle for liberty of thought. The movement thus engendered had become so formidable as to invoke the oppressive antagonism of the tyrannous Metternich, and the promulgation of the infamous Carlsbad Decrees, which provided for the rigorous censorship of the universities and newspapers by Government commission. Their provisions involved the suppression of any newspaper and the exile of any man who might express opinions inimical to the policy of the Government. The same interference with free thought existed in Austria and in Lombardy. The students of the University of Turin had been massacred because they appeared at the theatre in red caps. France and Spain were in a state of unrest, and the countries of Europe—the people—from the Mediterranean to the Baltic. The effort was being made to conform human life to those inherent laws of the social fabric that most make for happiness. The effort to reduce these laws, natural, inherent laws, to definite terms; the effort to adjust habits and customs to new ethical rules and to new constitutional provisions, produced a state of mental activity and of moral daring in every part of Continental Europe. This, then, was the social, political and intellectual atmosphere that prevailed in every German home, and even in the homes of Karl and Johanna Virchow, as they rocked the cradle of him, the formal appreciation of whose long and illustrious life is the object of our solemn reunion at this hour.

The clamor against absolutism was heard in childish murmurs at the public school at Schievelbein, to which young Virchow went at a tender age. There, in the little town in which the Reformation had long been the dominant force; there, in the little school beneath the shadow of the church, the synagogue, and the Castle of Malta,—a combination that in its catholicity was almost prophetic—the youth encountered forces that were potent in fashioning his subsequent illustrious character. It is in this fact that we, in free America, where the schoolhouse stands as the temple of rational belief, where it stands as the safeguard of the Republic, may take peculiar satisfaction.

The political agitations of the times, the little rivalries, the little hatreds, the fierce combats of the public schools, were not, however, sufficient to divert the youthful pupil from the successful prosecution of his studies; for, we learn, that he went, under age and with a particularly advanced knowledge

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of Latin, to the gymnasium of Koslin, where he was a source of surprise to the director. Here, at Koslin, again was the spirit of the Reformation, with its inspiration of truth and liberty, and its yearning for happiness. The fact was recognized even as far north as Pomerania that, in the Rhenish provinces, previously ruled by French officials, there was a higher idea of human rights than obtained in the other provinces of the Confederation; especially in those ruled by the powerful house of Brandenburg. There was, therefore, a clamorous appeal for the recognition of all that was attractive and great in the principles of the French Revolution, and the outcry for a constitution embodying those principles came from no province with more emphasis than from Pomerania, and from nowhere in Pomerania with more insistence than from Koslin and from Schievelbein. The Revolution of 1830 had brought coveted charters of liberty to Brunswick, Hanover, Saxony and Hesse-Cassel, while to Prussia it had brought only the farcical concession of a system of triennial provincial diets with merely consultative powers. In spite of these distracting influences, however, influences that are always alluring to the enthusiasm of youth, young Virchow passed from the gymnasium, 1839, first on the list of the Abiturienten. The independence by which industrious and ambitious youth refuses to be restrained within the confines of an arbitrary curriculum, is always the prophecy of a broad manhood. The child, in this instance, and by this rule, was, indeed, father to the man, for we find that he presented himself for his finals, not only in the required branches, which were difficult enough, but in Hebrew, which he had mastered from pure love of philologic research. It was this same impulse that prompted him, during the succeeding few months, to master Italian without a teacher, just as years later we find him resting himself from his scientific labors by delving into the charms of modern Arabic poetry.

A few months after leaving the gymnasium he set out for Berlin, a journey which, in those days, before the introduction of railroads, had about it more of adventure than is involved in the two hours' run of to-day. Of his career in the Frederic Wilhelm's Institute, it is sufficient to say that he was an arduous student. In the faculty then were Dieffenbach, the foremost surgeon of the day; Schonlein, who had come from Zurich the same year to join, not only the teaching body but to act as reporting council for the ministry, and to serve as physician-in-ordinary to the King; Froriep, who was in charge of the Pathological Museum at the Charité, and who, in addition, served the Government as medical counsellor; Caspar, who was also medical counsellor, with a seat in the medical deputation for medical affairs in the ministry; but,

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towering above all, was the intellectual figure of Johannus Müller, the Professor of Physiology. He was an original genius with daring, actually engaged in winnowing the wheat of demonstrable truth from the then prevailing chaff of egoistic opinion—to divorce a physical science from speculative philosophy. Prompted by the inspiration which he had derived in turn from Bichat and the French school, this professor of physiology was busily engaged in retesting in the laboratory truths previously elaborated by Haller, Whytt, Spalanzani, Cullen, Prochaska, John Hunter, the Bells, Magendie, Berzelius and Bichat himself. My fancy likes to dwell upon the almost dramatic moment when the shopkeeper's son from Schievelbein, the little keen-eyed, yellow haired stripling of nineteen, was ushered into the presence of this, the great founder of the modern school of physiology. There was in that meeting an intellectual impact that resulted in the transference and the perpetuation of great thoughts, great methods, which, perfected by the pupil, lead to still greater results. It was from this great professor that Virchow, during the next four years, was to derive those habits of investigation which, coupled with the spirit of daring, was to make him, in turn, the leading investigator in the realm of biological research. It must be remembered, however, that with all of the social and political disturbances, Germany was at that time thoroughly impregnated with a wholesome ferment. It consisted of the spirit of rational investigation, and was infused by Liebig in chemistry; by Humboldt, who was promulgating his discoveries leading to the publication, five years later, of his Cosmos; and by Froebel, who was establishing his marvellous principles of education derived from Pestalozzi, and which have since borne rich fruit the world over in every department of human instruction. It is not surprising, therefore, that with these antecedent influences, with these present surroundings, with these dominating forces, and with his marvellous insight and industry, Virchow should make such a record as a student, that upon his graduation he should be given the assistantship to the Prosector of the Charité Hospital. It was his first recognition, and it came with deserved promptitude. He was actuated at this time, as in his entire subsequent career, by the broadest principles of catholicity. During his student career, in addition to the prescribed lectures, he had gone into logic and psychology; in his busy, energetic way, he had mingled with the political organization among the students, and there were already manifest tendencies which, a very few years later, brought him before the German public as a scientist, a philologist and a social reformer, and a democrat. Promotion came without undue delay. Froriep resigned as Prosector in 1846, and

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Virchow was elected to the succession. His work with Müller, however, had brought him in contact, not alone with that great man's scientific method, but with his habits of publicity as a scientific writer. *Archiv f Anatomie Physiologie u wissenschaft Medicin*, long issued by Müller, soon found an imitator in the Department of Pathology in the periodical issued jointly by Virchow and Reinhardt, and which, on the demise of the latter, Virchow continued to edit until his death. The political and economic conditions were fashioning themselves into the Revolution of 1848, when Virchow, already in influential touch with the Prussian Government, was delegated to investigate an epidemic of typhus fever which was then raging in Upper Silesia. The work was done with his characteristic thoroughness, transcending the prescribed limits of his instructions. He investigated not alone the pathological and clinical phases of the disease, but he entered freely into a discussion of the hygienic, economic and social conditions underlying the epidemic. He even went so far as to indicate a number of social reforms, essential to the prevention of such epidemic, and tinctured his science with considerable democracy, his outspoken utterances, in these particulars, causing a distinct sensation in the ministry.

The trip to Silesia seems to have been a very important experience in Virchow's career. His previous tendencies as a reformer in the direction of popular liberty were now fully confirmed, and he became an active participant in the great revolutionary movement of that year. He unhesitatingly promulgated his platform as that of full and unrestricted Democracy, on which theme he made violent speeches to the Berlin populace, by whom he was elected a member of the National Assembly. His political ambitions, however, were destined to be temporarily curbed by the fact that he was under the parliamentary age, and was, consequently, not permitted to take his seat. His energy, however, found a compensatory outlet; for, with Leubuscher, he founded a journal which they called *Die medicinische Reform*, through which he advocated the establishment of a Ministry of Health, and insisted, among other measures, that medical education should be made free. These suggestions, not originating with the Government, were scarcely less distasteful to the Ministry than was his report from Silesia, or than were the political harangues which he continued to pronounce to the plaudits of his fellow burghers. He seemed at this time to be largely dominated by the spirit of iconoclasm, not, however, that form of iconoclasm which is merely an expression of the spirit of destruction, but that better iconoclasm by which old gods are destroyed that newer and better ones may be erected. He invaded the realm of

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theology, and proclaimed, not a mere agnosticism, but a positive disavowal of the existence of a hell, insisting that "only a benighted Mechlenburg pastor could be so foolish as to believe in a devil." The Government, committed not only to the task of maintaining the national order, the national laws, but the national religion, looked upon the young orator as a dangerous polemic. He was compelled to resign his appointment as Prosector for the Charité, where, in spite of all his political agitations, he had conducted epoch-making researches on leukemia, embolism, thrombosis, phlebitis and other phases of morbid anatomy. He had already become a teacher of ability, and his researches had attracted widespread attention. These facts, quite as much as the influence of his colleagues at the Charité, probably saved him from the decree of exile issued at that time against many participants in the revolutionary movement. He was, however, banished from Berlin to Wurzburg, where, in May, 1849, he accepted a chair in the faculty of the University. There was here less opportunity for effective participation in the political movements, and his energy found fuller exercise in the prosecution of his original researches and in the exercise of his philological tastes. During the seven years that he remained here he kept up his study of Italian, Arabic, and acquired a knowledge of English. His scientific researches at Wurzburg embraced the subjects of phthisis, tuberculosis, typhoid fever, cretinism, hydronephrosis, adipocere, echinococcus of the liver, amyloid degeneration of lymphatic glands, the corpuscles of bone, cartilage and connective tissue, and he thoroughly investigated the anatomy of the nails and the epidermis. While *Die medicinische Reform* was discontinued shortly after he went to Wurzburg, the young professor, instead, edited a *Handbuch der speciellen Pathologie*, and, in connection with J. Vogel, issued a manual of general pathology.

It seems from a careful study of Virchow's career that it was about this time that his observation of concrete facts had become sufficiently extensive to justify him in venturing upon important generalizations; for the little manual issued in connection with Vogel contained many of the fundamental principles which a few years later were elaborated into his famous *Cellularpathologie*, in 1859. He had been recalled to Berlin in 1856, under circumstances that invested the incident with the characteristics of a triumph. The chair of general pathology had become vacant through the resignation of his former teacher Froriep; in all Germany there was none so able to fill it as the young democratic professor. He was sent for, but paused to consider. When his reply came it brought his acceptance, based, however, upon the condition that an institute for practical work should be founded. His terms

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were accepted, not only in this but in other particulars, and he at once entered seriously upon what must be recognized as his more distinctive life work. The museum at that time contained 1,500 preparations; at his eightieth birthday, as the result of his own individual labors, the number had increased to 23,000. In his work he was actuated by the view, expressed in his own words, that "the role of pathological anatomy as a dogmatic science is at an end, for each individual law we must have the proof clearly recognized and carrying personal conviction." He insisted that the whole of the then existing system must be abolished, and that a new philosophy, based upon observation and experiment, must take its place. This new pathology, he insisted, must come about gradually, and not as the mental product of individual enthusiasm. It must be achieved as the outcome of laborious research by many competent investigators, and, when thus evolved, and thus only, could it be accepted as the basis of scientific medicine.

The engrossing character of Virchow's labors at the Institute at this time, the absorbing enthusiasm involved in the promulgation of a new and revolutionizing philosophy, the exactions of editorial duty, all combined with the responsibilities of professorial work were not sufficient, however, completely to divert his attention from collateral and often apparently irrelevant studies, and from participation in the fierce political controversies that were then agitating the German people. William I. had ascended the Prussian throne in 1858. There was some hope of relief from the oppressive measures of his predecessors, and this very hope stimulated the activities of the Democrats or of the "Demagogen," as the party was appropriately designated by the Conservatives. Virchow, notwithstanding his unpleasant experiences that had resulted from his banishment to Wurzburg, immediately identified himself with the cause of popular liberty. In this he was actuated by a profound contempt for the reigning house, a contempt which, on occasion found expression in his famous observation on heredity. "I know a family, a very exalted one," he was wont to say, "in which the grandfather had softening of the brain, the son hardening of the brain, and the grandson no brains at all," the reference being to the three Frederics, the immediate predecessors of the then reigning monarch. The work of the mere agitator, however, was not sufficient for one of Virchow's temperament, particularly to one who, after a previous election to the National Legislature, had been denied his seat on account of his youth. He was, in 1862, older by fifteen years, and, accordingly, offered himself as a candidate for the Prussian Chamber, to which he was duly elected. It was in the same year that Bismarck became

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Prime Minister, a coincidence which marked the beginning of an antagonism that continued throughout the political careers of the two men. Virchow speedily became the leader of the Radical party, and by his advanced views and cogent reasoning, and by his courageous insistence upon them, he speedily earned for his policy the opprobrious designation of "Professorismus," applied by the Iron Chancellor. While these debates were going on the duties at the Institute, at the Charité and in the editorial office were not neglected, although there is ample testimony that Virchow was often tardy in keeping his appointments. The famous Schleswig-Holstein episode diverted for a time the attention of the Legislature from internal to external affairs, and culminated in the war with Denmark in 1865. In this war Bismarck against Virchow's opposition used Austria as the cat with which to pull the chestnuts from the fire, and then, three years later, again over Virchow's opposition, he proceeded to kill the cat. As a result of this war with Austria in 1866, the Germanic Confederation of 1815 was terminated and the North German Confederation took its place. It may be premised that Virchow, who, with all his democracy, was always a Unionist and Nationalist, deprecated this segregation of the Germanic people. It was in the course of this long sustained opposition to the policy of the Government that he, as chairman of the Finance Committee, a position which he held for many years, succeeded in defeating an appropriation for naval purposes that had been demanded by Bismarck, who thereupon challenged his successful antagonist to mortal combat. Virchow, with no disposition, whatever, to give the Herculean warrior an opportunity to exercise his professional skill, and with moral courage to stem the tide of sentiment in favor of duelling that still disgraces Germany—a courage vastly excelling mere physical bravery—declined the cartel, but continued his opposition. This opposition was carried along through the days of the Franco-Prussian war, but when the first shot had been fired Virchow, always a patriot, and always the physician, took his son and joined the army, the two serving in the capacity of surgeon in the field. These men, father and son, did their full measure of duty, conspicuously upon the field of Metz, in alleviating the sufferings of their wounded compatriots. No sooner, however, had peace been concluded with the proclamation of William I. as Emperor of Versailles, than Virchow resumed his wonted activities in science, in literature, in politics at Berlin. It was then that probably for the first time in his political career he found himself *en rapport* with the leading features of Bismarck's policy, namely, the policy that involved the construction of the present German Empire. It may have been this particular fact, quite

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as much as a general appreciation of Virchow's worth, that prompted Bismarck, before his own retirement, under the present Emperor, to apologize publicly for many asperities which had characterized his previous attitude toward the great savant.

About this time the widened scientific view of Virchow, a view which had come to embrace the whole science of man as comprehended in the then slumbering science of anthropology, began to be manifested in his contributions to literature. He was already accumulating facts which were to serve as the ground work of ethnology; yet, in spite of all this, acting in his capacity as a member of the Town Council, a position which he held for more than forty years, he was not oblivious to the fact that the sanitary condition of Berlin was deplorable. He, accordingly, became responsible for the establishment of those enormous hygienic reforms that have banished typhoid fever and other zymotic diseases from Berlin, and that have rendered that city one of the most salubrious in the world. Archæology also was at this time engaging his attention, and in the midst of the preparation of his valuable work on the Topography of Troy, he, in 1878, retired from active political life, only however to be elected, two years later, to the German Reichstag. In this body, however, he was always rather an interested spectator rather than an active participant, and never aspired to the office of party leadership. It is not to be assumed, however, from this that Virchow's intellectual activity was by any means at an end, or even upon the wane. The twenty years following his election to the Reichstag were among the most fruitful, intellectually, of his entire life. He amplified, in many particulars, his teachings of cellular pathology. He delved more deeply than ever into the hidden mysteries of ethnology, producing in 1882 his valuable work on "Old Trojan Graves and Skulls." At the very pinnacle of scientific fame he kept himself *au courant* with the whole trend of scientific thought, delivering an address before an International Congress at Berlin, at Paris, at Moscow or at Rome, laboring in an assemblage of scientists here, or in a hygienic congress there, or delivering a Croonian or a Huxley lecture in London. With his editorial labors always in hand, he still clung industriously to his old haunts in the Pathological Institute, in the Anthropological Museum, or in his ward at the Charité, for, be it remembered, Virchow was always a practical physician. It has been said of him that during these years he knew no such thing as vacation, in the ordinary sense of the word, for it was his habit rather to find recreation in a change of occupation, such, for instance, as visiting Asia Minor, and, pick in hand, to assist his friend Schliemann in his won-

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derful archæologic researches. In the midst of it all he was very much of a man on the human side—a little wiry man, but a little over five feet in stature—sprightly, congenial, loving and lovable. His domestic life has been described as ideal. The many Americans who were present at the Berlin meeting of the International Medical Congress, will recall his active and whole-souled participation of the festivities of that occasion. He was given a Festschrift on his seventieth birthday, and again on his eightieth, on which latter occasion, in particular, delegates were present from practically every country, and festivities were held simultaneously in practically every leading city of the world. On January 3rd, 1902, he sustained a fracture of the neck of the femur by falling from a tram car. He died September 5th, 1902, mourned by the civilized world. The municipality of Berlin, which he had faithfully and efficiently served as a councillor for so many years, accorded him the distinction of a public funeral, which, in the midst of universal mourning, was participated in by many officials from the political and scientific world.

This, then, was the man upon whose work we are called, at this hour, to pronounce a formal appreciation. It is rare, indeed, that the occasion arises to attempt in even a desultory way, the estimation of a career that has resulted in the establishment of two distinct, although correlated sciences, and in the substantial advancement of human liberty. It would be quite out of the question in an address such as this, to attempt a *resumé* of his doctrines in pathology, a mere enumeration of his contributions to which would involve the employment of more than twice as many words as I shall employ in your hearing. We may, however, arrive at some estimate of his work in this great department by pausing for a moment to consider the state of medical science, or more particularly the conceptions of disease, that obtained in Germany when Virchow was made the successor of Froriep at Berlin. It is true that Rokitansky had introduced many of the revolutionizing doctrines of Bichat at Vienna, but even Rokitansky was busying himself to an important extent in promulgating the purely dogmatic doctrine of crasis. Oken, at Munich, was indulging in the glittering generality that life is the self-generation of individualized elements, that the principle of life is galvanism, and that vital force is galvanic polarity. Of him, Agassiz declared that he constructed the entire universe out of his brain. Dollinger, of Wurzburg, the father of the great theologian, belonged to the same speculative school, which a historian has designated as the "Romanticist or Teutomaniacs." At Berlin Schonlein, who had been one of Virchow's teachers, and was yet his colleague, and who represented what was designated as the Natural

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History school, taught that disease was an entity, a sort of parasite sojourning temporarily in the body, just as Paraselsus had once spoken of "a microcosm within a microcosm." Schonlein, more specifically, looked upon disease as a sort of equivocal infusoria, the existence of which he logically predicated, but never, of course, physically demonstrated. These infusoria, the existence of which were thus gratuitously assumed, were easily enough imagined to consist of genera and species, each producing different clinical phenomena—a sort of empirical prophecy of the germ theory which has since played so important a role in medical philosophy. It was against such theoretic doctrines, then dominant, that Virchow brought the evidence of the microscope and the revelations of the mortuary. He began in the truly scientific manner, which consists always, first in the observation of concrete facts, next in their classification, and third in their ultimate generalization. His labors at Wurzburg, supplemented by those conducted under more favorable auspices after his return to Berlin, enabled him to announce, as the seminal doctrine of his philosophy—and I employ the words he subsequently used at the Fiftieth Congress of Naturalists and Physicians—namely, that the new science was based "chiefly on the recognition of the fact that the cell is actually the ultimate, proper morphological element of every vital manifestation, *omnis cellula e cellula*, and that we must not remove the proper action beyond the cell." In the early elaboration of this doctrine, taking up the work where Schwann and Schleiden had left it, he proclaimed the importance of the nucleus to the maintenance and multiplication of the cell, and emphasized the fact that tissue growth implies cell multiplication, while the contents of the cell, and even the material deposited outside of it, are of controlling importance to function. He taught, furthermore, and as a necessary corrollary of the preceding postulates, that tissues vary in function according as they vary in cellular construction. He insisted upon the existence of an inter-cellular tubular system that supplemented the recognized circulatory systems in the work of ultimate nutrition. As a result of his investigations of the circulatory apparatus and of the blood he taught that the walls of the blood vessels were impervious, and argued that blood, or even the nutrient elements of the blood, could not escape from them without rupture of the walls, which rupture was, however, rarely, if ever, demonstrable. It would seem that in this doctrine, which I believe is as near an approach to empirical dogmatism as could be found in all his teachings, Virchow laid a logical foundation for the new doctrine of Osmosis that to-day promises to take both physiology and pathology largely into the realm of physics. He directed his arguments speci-

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fically against the then prevailing humoral pathology by insisting that the blood itself is not the proper and original cause of dyscrasia, as taught even by Rokitansky, but that instead these dyscrasiæ have their origin rather in a disturbed metabolism, the toxic products of which are merely carried in the blood. His laborious study of many phases of blood changes comprises the basis of our present accurate conception of the pathology of the circulatory medium. His study of inflammation, in the description of which he insisted that disturbed function should be added to heat, pain, redness and swelling, as one of the cardinal indicia of the phenomena, gave an accurate conception of the actual changes. His elaborate investigations of the nervous system resulted in the promulgation of doctrines whose parentage in the works of Brown and Haller is recognizable. His work on tumors, a distinct application of the cellular doctrine, stands to-day as the fundamental classic of the subject. His investigation of tuberculosis resulted first in his classification of the disease into neoplastic and inflammatory forms, but latterly he recognized the bacilliary forms. It would be impossible, however, as I have before stated, to give even an accurate *resumé* of this extensive philosophy, the application of which to the entire phenomena of disease must stand as his crowning achievement. It is interesting to hear him recount, as he did in a lecture delivered in London during the last years of his life, the general summarization of his work in the statement that "the law of continuity of animal development is, therefore, identical with the law of heredity, and this I was now able to apply to the whole field of pathological new formation." And it was especially interesting, in view of the ideas against which he had to contend, to hear him add with pardonable exultation: "I blocked forever the last loophole of the opponents, the doctrine of specific pathological cells from which types and ancestors were not forthcoming in normal life." The doctrines which he had thus established, and to which he thus alluded, became early in their history the actuating principles of the "Berlin School," which sooner or later embraced the names of Leydon, Von Rechlinghausen, Cohnheim, Waldeyer, Hoppe-Seyler, Kuhne, Rindfleisch, Klebbs, Liebrich Frederic, in Germany; Felix Simon, in England, and conspicuously, W. H. Welch in the United States. The principles taught by this school are, by common consent, those upon which modern surgery and rational therapy alike are placed.

The position that must be accorded to this doctrine in the light of further revelation of fundamental law cannot be foretold. Nothing could be further from the purpose of Virchow himself, than the assumption that his doctrine was the all-truth.

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He viewed with great conservatism the doctrine of the infectiousness of disease based upon observations that were made possible only by a later perfection in optics and by later advancements in the technique of biologic research. The most that can be said of the relation of the germ theory of disease to that of cellular pathology is, that without invalidating the important conclusions embraced in the latter, it left Virchow's recorded observations unimpaired and undisputed. The new doctrine of the Ions, involving the principle of Osmosis, may bring other and important supplementary facts which shall serve to show that the discoveries of Virchow comprised in the aggregate a single but important link in the imploring chain of science.

The next phase of Virchow's character as a scientist relates to his work in the department of anthropology. This, the science of man in its broadest conception, can scarcely be said to have had more than a mere beginning before Virchow, commencing with his work in biology, was led into it by the widening circle of associated ideas. It may be said, indeed, no valuable contributions were made to the subject during the first half of the 19th century. Blumenbach, Gottingen, had made his famous collection of skulls—his "Golgotha" as he called it—which was the basis of his own investigations, and which may be said to have been the starting point of systematic anthropological study. About the same time—that is the last years of the 18th and the first years of the 19th century—von Sommering, of Frankfurt, studied the eyes, not only with reference to their anatomical detail but with reference to their ethnic significance, while Camper, of Holland, made a careful study of the facial angles. This was practically all that was done with the subject until Darwin issued his "Origin of Species" in 1859. His "Descent of Man," his first contribution to the subject of ethnology, did not appear until 1872. Long before the latter date, however, Virchow had taken up the subject at two points of contact. The first point of contact was developed out of his philosophy of cell genesis, the doctrine that all cells are derived from pre-existing cells, which he promulgated in 1859, and which brought up as a natural corollary the question of variation of type. His antagonists—the believers in special creations—seized eagerly upon this declaration as a refutation of the then rapidly growing materialistic philosophy, and as a vindication of their own ontologic dogmas. If the cell is the vital unit, as Virchow declares, and if the individual is but the sum of cells, they urged then, variation in the individual cannot only occur as the results and commensurately with the variation in the constituent cells; if, they added, like cells always beget like cells, as Virchow declares,

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then the individual, the sum of cells, cannot vary from his cellular type; and, finally, they insisted if all the cells in the individual have been derived through the generations from cells of the same type, then the original cells, at the beginning of things, must have been the products of a special and miraculous creative act. Unfortunately, however, for this specious logic, Virchow taught, in effect, that like cells beget like cells, only, however, under like circumstances, and that, as the circumstances vary, so does the cell type vary. This is, indeed, the point of departure from the standard of health, the very beginning of pathological phenomena. As a matter of fact, Virchow simply declined to discuss the origin of species until sufficient evidence to justify him in doing so could be derived from a careful search of the tissues. He recognized the mutability of the cells, and realizing, logically, that variations in type must begin in these vital units, he, without denying the truthfulness, or affirming the falsity of Darwin's hypothesis, simply awaited the demonstration of the actual changes within the cell. It is an interesting fact, and one bearing testimony to Virchow's scientific acumen, that this very variation was reduced to a physical demonstration in 1900 by Professor Guyer, of the University of Cincinnati, whose investigations are recorded in his valuable contribution on "Hybridism and the Germ-Cell." It is also of striking interest, at this time, and one bearing testimony to the reliability of Virchow's deduction, not only that these observations of Guyer's, but that Mendel's Law promulgated through an obscure periodical at Brunn, Austria, in 1865, seemed to cover the entire point. This Law of Mendel's or, as I believe we should call it, the Mendel Guyer Law, is in effect that, as the result of definite and demonstrable changes in the germ cell, the second and later generations of a hybrid possesses every possible combination of apparent characters, and that each combination appears in a definite proportion of the individuals, the whole reduced to the terms of a definite equation. This law, revealed by observations in both the animal and vegetable world, seems to be one of general applicability, and one that is calculated to invest the conclusions of Virchow with an increased value.

The next point at which Virchow was brought in contact with the general problem of anthropology, or more particularly that of ethnology, grew out of his studies of cretinism and of the causes of variations in the growth of the skull. It was precisely this study of the pathologic phases of craniology that enabled him to detect morbid changes in the celebrated Neanderthal skull, which, with its protruding supraorbital ridges, its low forehead, and its small cranial capacity, even the scientific world was too disposed to accept as the normal index of

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a racial type that had long since passed away. Virchow further insisted that, even if it were normal, the existence of a single skull was not sufficient evidence upon which to predicate the existence of an entire race, and that conclusions should be withheld until further evidence was secured. It was this cautious utterance, thoroughly characteristic of Virchow, that gave the theologic polemics another opportunity falsely to proclaim that he was an antagonist of the doctrine of descent, as promulgated by Darwin. It seems that the utterance, seized upon for this particular misrepresentation, occurred in an address delivered in 1877 before the German Naturalists and Physicians, and was to the effect that the hypothesis of Darwin ought not hastily to be given the force of law—that it ought not to be placed in the category of law—without first waiting to gather and accumulate all relevant facts. It was just this scientific discrimination between hypothesis and law, and just this conservative tendency in the consideration of demonstrated facts, and in the formulation of conclusions based upon them, that gave to the judgment of Virchow the greatest possible weight in the scientific world. And it was this very weight which he himself, as late as 1900, with true scientific spirit, was disposed to deprecate; for he had spent his life in dethroning the power of personal influence, and in establishing the regnancy of demonstrated truth.

His work in anthropology, however, considered from its positive side, was very great. He was always an organizer—a valuable weakness in a man of brains,—and it was by this means that much of his work was brought to its full fruition. He organized, or at least assisted in the organization of the German Anthropological Society, and the *Berliner Gesellschaft fur Anthropologie, Ethnologie und Urgeschichte;* he helped to found the *Museum fur Volkstrachten* and the almost invaluable *Archiv fur Anthropologie.* He, with his colleagues, gave serious study to the physical characteristics of the early Germans. This was supplemented by statistical investigation of the present distribution of the color of skin, eyes, hair, in Germany, the whole being reduced to cartographic representation. His descriptions of American crania, based upon Morton's great work, opened that mine of information to German thought. He was the friend and promoter of Schliemann, in whose archæological explorations he was at times a personal participant; he recorded the results of these labors in two books, "Contributions to the Topography of Troy," and "Old Trojan Graves and Skulls," each of which is recognized as a valuable contribution to the subject. Extensive, however, as were the researches, and important as were his recorded observations, it does not appear that he considered either of them sufficiently extensive to warrant him in arriving at important general conclusions. He felt

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justified, however, in saying, as he did say, that physical types do not vary with variations in language and culture, and that different types may blend in the formation of a homogeneous people. This lesson was taught him by a study of the racial types in Germany, and is of extreme interest to us in the United States, where, at this moment, we are in the midst of the greatest ethnic experiment in the history of the human race. In viewing the entire scope of Virchow's labors in anthropology, it must be concluded that he did not carry them to the point of even relative finality that he did his labors in pathology; his researches, his discoveries in ethnology, must be recognized as fundamental, their true significance remaining to be interpreted in the light of rapidly accumulating evidence. It is sufficient, however, for the perpetuity of his fame that, by common consent, he is recognized as the veritable founder of this new science which promises so much for the interpretation of the racial types of men.

The third side of this great character was the human side, manifesting itself not alone as a husband and father, but conspicuously as a citizen. He early showed that the prevalent opinion that to be highly intelligent on one subject it is necessary to be correspondingly stupid on all other subjects is but a vulgar notion; and he speedily demonstrated that the viewpoint of the physician is eminently calculated to afford an intelligent insight into social, economic and political conditions. I must, however, leave it to the political historian and to the public economist to tell what good has been accomplished in Germany in the last fifty years by the Liberal movement, a movement that for many decades enjoyed the distinction of Virchow's leadership. A few things are certain—the hated Carlsbad decrees could not be re-enacted in Germany to-day. There is a greater freedom of thought, and what is more important, of expression in German universities, than ever before. The offence of *lese majesty*, strange sounding to Republican ears, has a less severe meaning in Germany than it had fifty years ago, and it is equally certain that, for the first time in history, the entire Vaterland has a reasonably liberal constitution, wrested from the tyranny of absolutism—a condition that leads to the hope that the German people may some time enjoy the same beneficent government that to-day blesses the great Republic. In the achievement of these results it cannot be denied that Virchow played a leading and an honored part.

What, then, are we to say in final review of this great man? His figure is that of a colossus, and it will require the prospective afforded by receding years to measure its relative height. Some things, however, we can now tell. He inherited honest



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blood; he responded in the fullest and in the best sense to the formative influences with which his early life was surrounded; he had the independence to defy personal dictum and to give allegiance only to demonstrated truth; he had the intelligence to discern, and the human sympathy to appreciate that human happiness depended first and chiefly upon a knowledge of the laws underlying and governing human existence. He worked on independent lines and revealed laws of disease previously hidden; he by his observations and deductions, and by the elaboration of rational methods, laid the foundation of modern medicine. He established the study of racial man as a science. He fought the battle for human liberty, and won for others the boon that he had always arrogated to himself. He added years to the generation of man, brought happiness to his kind. Finally, let it be recorded, that above all he lived faithful to his ideals—and the greatest of these was Truth.

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## THE TREATMENT OF SEPTIC ABORTION.*

By K. C. McILWRAITH, M.B., Tor., F.O.S., (Edin.)

*Mr. President and Gentlemen:*

I wish to bring before the Association a method of treatment for septic abortion which has given uniformly good results in my hands.

Briefly, I mean by septic abortions those cases in which, to the ordinary unmistakable signs of pregnancy and abortion, febrile symptoms are added.

The instruments needed are, two pairs of tenaculum forceps, and a Bozeman's intra-uterine douche nozzle of large size. These should be sterilized by boiling and placed ready for use in a one per cent. lysol solution. The patient is anesthetized, placed in the lithotomy position, and the vulva prepared by thoroughly scrubbing it with green soap and hot water, which is washed off with lysol solution, one per cent. The vagina is then scrubbed with green soap and the fingers, or a bit of cheese cloth, and douched out with lysol, one per cent. The uterus is then grasped by the left hand through the abdomen, to make counter-pressure, and the cervix is dilated, if necessary, by the fingers of the right hand, as much of the right hand being introduced into the vagina as is necessary to allow the fingers to thoroughly explore the whole uterus. If the whole hand has to be introduced, the vaginal orifice must be gradually

* Read at Meeting of Ontario Medical Association.

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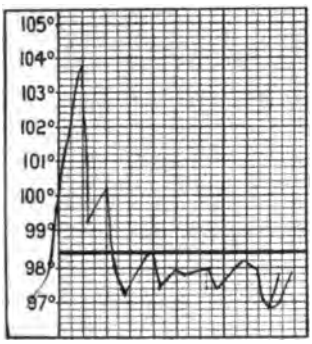
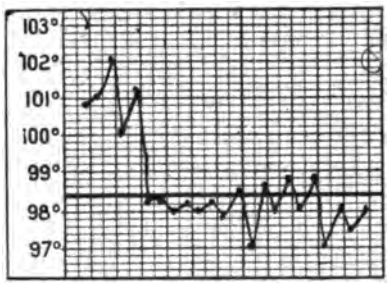
dilated by the fingers formed into a cone. I usually try to get the cervix sufficiently dilated to allow the passage of the first and second fingers together, though I have emptied a three-months pregnant uterus through a cervical canal that would only permit the passage of the forefinger and the tip of the second.

The fingers in the uterus are used to entirely separate the ovum from the uterine wall. The uterus is then anteverted by the hand on the abdomen, the fingers of the other hand being withdrawn from the uterus and passed into the anterior vaginal fornix. The fundus uteri can thus be squeezed between the inside and the outside hand, and its detached contents expressed into the vagina and withdrawn. The anterior and posterior lips of the cervix are then grasped with the tenaculum forceps, the cervix drawn down close to the vulva, and the uterus copiously douched out through the Bozeman's douche, with lysol solution, one per cent. Next, the uterus is snugly




packed with iodoform gauze, a little of which is also left in the vagina. I prefer for this purpose gauze put up in the form of a roller bandage, two inches wide, of a strength of 5 to 10 per cent.; and I use the Bozeman's douche nozzle as a packer. The gauze is removed the next morning.

This procedure, like all intra-uterine manipulations, is frequently followed by a chill in a few hours. I have used it many times during the last five years, and it has never failed to give the best possible results. By the end of 48 hours the fever has always disappeared and the patient made an uninterrupted recovery. I have here several charts which illustrate this.

I may perhaps be permitted to compare this form of treatment with other forms.

(1) Neglect. A few months ago a patient was admitted to the Toronto General Hospital suffering from septic abortion.

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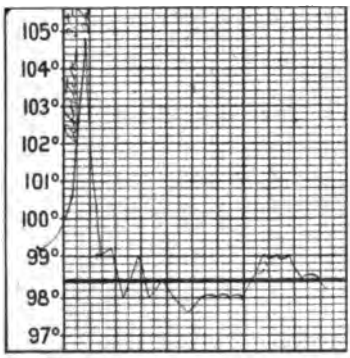
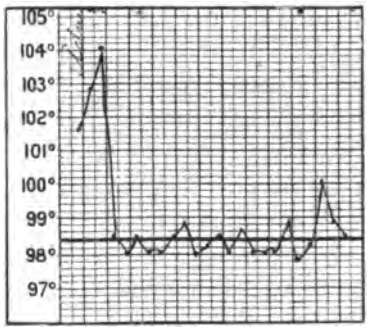
It had been going on for six weeks, no medical attendant having been called and nothing done.

Dr. A. H. Wright saw this patient with me, and we agreed that she was in too low a condition for operative procedure. She died. Septic abortion, then, will not right itself.

(2) Flushing curette. This is a favorite method with many. It is easier than the method I advocate. At the Rotunda Hospital I saw a patient who had been curetted for abortion two months previously. She had suffered from hemorrhage at intervals ever since. The cervix was dilated, a finger introduced, and a considerable portion of the ovum found which had been left behind by the curette.

In hospital practice in Toronto we frequently find portions of the ovum retained after it has been supposed to be removed by the curette. I remember one case in particular, which I




saw in consultation about a year ago, which had been curetted. Almost the entire secundines were found attached to the fundus by a small pedicle, which the curette had missed.

We must remember, too, the danger of perforating the puerperal uterus with the curette, especially when it is softened by infection.

Finally, it has been pointed out by a recent writer that to be sure of emptying the uterus with a curette, it is necessary to scrape the whole interior. This is never necessary, and in septic cases is very dangerous, as it opens up new avenues for infection.

Since this paper was read I have performed this operation twice with perfect success. Once in St. Michael's Hospital and once in a private house. In the latter case I had only one untrained assistant. I anesthetized the patient myself. I was, of course, able to use only one tenaculum forceps.

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# PLACENTA PREVIA.*

By HEWARD DAVID LIVINGSTONE, Rockwood, Ont.

Although the consensus of modern opinion regarding the treatment of this condition favors the induction of labor, authorities differ in many respects, not only with reference to the methods employed, but also as to the proper time for interference.

As the subject is one of such importance, and requires such early recognition and prompt treatment, I may be pardoned for reviewing the nature of the affection and offering a few suggestions, based partly on my own experience, and on that of my confreres who have encountered similar conditions in practice.

Normally, the placenta is located at the uterine fundus, that is in a situation in which uterine and placental development are equalized.

As usually defined, we understand placenta previa to refer to a condition in which the placenta occupies the lower zone of the uterus and infringes on the internal os.

It is, however, possible for the placenta to find lodgement on any portion of the uterine surface, the nearer it approaches the fundus the more marked being the disproportion between its growth and that of the uterus in the latter months of pregnancy, and the greater the risks of separation and hemorrhage.

Although some authorities confine the definition of placenta previa to its situation on or over the internal os, it seems reasonable to infer that the condition is subject to variations in degree, that the point of placental election may quite possibly be any place between the cervix and fundus, and that consequently placental hemorrhage may be divisible into two classes, depending on situation, both induced by malposition, and varying directly in severity as the site of attachment approaches the internal os. This theory, if acceptable, would materially influence our views regarding treatment.

Admitting the fact that the risk lessens as the placental situation approaches the fundus, we still meet with cases of hemorrhage at or after the seventh month, in which on examination no placental presentation can be determined, and which, for that reason, are commonly ascribed to accidental hemorrhage. Excluding those cases in which a history of traumatism is not a marked predisposing factor, it would seem reasonable to attribute the loss of blood to the same condition, which

* Read at Meeting of Ontario Medical Association.

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obtains under placenta previa, namely, malposition, but in a lesser degree. Under such circumstances many favor the policy of temporizing, providing the initial hemorrhage has been slight, with the object of increasing the child's chances, although records show that pregnancy in any event is rarely prolonged under the most favorable conditions. Reasoning on the assumption that, in the latter months of gestation, the risk of hemorrhage increases, in direct ratio as the placental attachment approaches the cervix, and that the placenta may occupy a dangerous location and still be sufficiently high to escape the examining finger. I consider that in these instances we are justified in adopting radical measures and hastening premature delivery, particularly so when the case is not under immediate supervision.

Given the diagnosis of placenta previa, the question of treatment leaves only one alternative—emptying the uterus. I do not think a consideration of the child's viability should preclude prompt interference, the most important point being the adoption of that method which will ensure the minimum of risk to the mother.

If the os is not sufficiently patulous to allow turning, the decision remains between rapid and slow dilation, the former being preferable if the case is urgent. Slow dilation may be effected under favorable circumstances by packing the vagina thoroughly with dry aseptic gauze. After bringing down a lower extremity the chances of immediate bleeding are minimized, and labor should be allowed to terminate with as little assistance as possible.

Rapid extraction is to be avoided. It is probable that this procedure is responsible for more deaths than is generally supposed owing to the liability of rupturing the uterus and the sequence of shock and intra-peritoneal hemorrhage.

In dealing with the complete type of placenta previa we are confronted by a condition which hardly justifies the adoption of the methods cited for the treatment of the marginal form. The risk of bleeding is much increased by its circumscribed attachment, and we are warranted in seeking a course which, if still heroic, would tend to obviate the dangers of severe hemorrhage. It is still a disputed point as to the advisability of entering the abdominal cavity, but recent investigation is inclined to indicate Porro's operation as offering many advantages over other methods heretofore pursued.

I beg to submit for approval a suggestion, which, if feasible, should obviate the dangers attendant on placental separation, and also preclude the necessity for abdominal section. I refer

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to the ligation of the uterine arteries per vaginam and the exclusion of the main source of hemorrhage. Providing the vagina is sufficiently roomy and the cervix within reach, the operation should not present formidable difficulties, and in consideration of the high mortality in the central insertion, it would, if successful, extend a hope for better results in an affection which frequently calls in vain on all the resources at our command.

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## MIRROR WRITING.

By ROBERT D. RUDOLF, M.D. (Edin.), M.R.C.P. (London).
Lecturer on Medicine and Clinical Medicine in the University of Toronto.

Mirror writing is that form of chirography in which the words look strange to the ordinary reader until they are reflected from a mirror, or are read *through* the paper on which they are written. When thus seen, the writing appears to be natural. On the other hand, when ordinary writing is viewed in a mirror it becomes mirror writing, and to most readers is illegible. When a page of ordinary writing is blotted, the impression left in the blotting paper is mirror writing.

The subject has from time to time attracted the notice of the profession, and there are a considerable number of cases of it on record. Perhaps the first writer to describe the condition was Erlenmeyer in 1879. Hughlings Jackson and Buchwald also early referred to it. Ireland, in 1881, brought it prominently before the profession by a paper in the *Brain* (Vol. iv, page 361), and most subsequent writers refer back to his article.

"According to Savage, mirror writing is met with in some forms of mental weakness and in conditions of mental disorder allied to the hysterical; occurring also in cases of moral perversion, where it may be only temporary and being observed more commonly among women than among men, and being most easily acquired in highly nervous people." (C. K. Mills, *Journal of Nervous and Mental Diseases*, 1894, page 88.) This, however, is, I believe, a very incomplete description of the conditions in which it may occur.

A slight form of mirror writing is possessed by almost anyone who likes to try, and no doubt by practice almost anybody could learn to do it well. In true mirror writers, however, this is the way in which they naturally write. Such people seem to be invariably left-handed. Right-handed mirror writing is a purely unnatural and artificial form of chirography.

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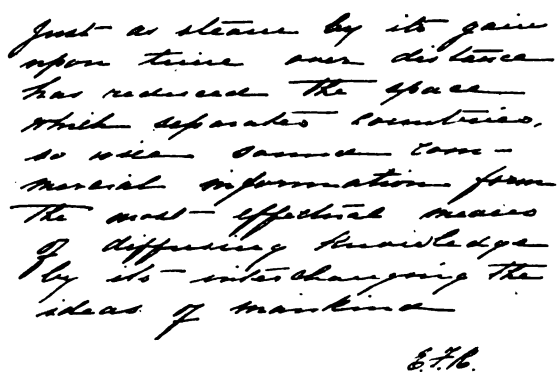
A well marked, and in some ways very peculiar, case of mirror writing has recently come under my notice, of which the details are as follows:

A. B., a married lady, aged 29 years, is an American of French extraction. She is highly intellectual, and is an accomplished pianist and linguist. She is markedly left-handed, and, in spite of the fact that ever since childhood she has been most strictly educated to use the right hand, she now sews with the left, and holds her table knife in that hand. She cannot remember when she began to write in mirror fashion, but thinks that she did so the first time that she attempted to write at all. She did not copy it from other mirror writing, as we might copy a picture. At first she always did it with the left hand. With unusual difficulty she learned to write with her right hand in the ordinary manner. At present she can write with facility with either hand in either manner, and I show



RIGHT HAND.

here specimens of her four methods of doing so. Of all four ways the most easy and natural for her is left-handed mirror writing. She never had any tendency to mirror speech. She can read mirror writing quite easily, but not so quickly as the ordinary form; probably the want of practice explains this. There are no signs or symptoms of any disease.

What is the explanation of ordinary mirror writing? All the cases on record seem to be ones of writing done with the left hand, and one writer refers to "left-handed *or* mirror writing" (F. J. Allen, on mirror writing, *Brain*, Vol. xix, 1896, page 385), thus using the terms as synonymous ones.

In my case, the writing could be done with either hand, but this point will be again alluded to. Erlenmeyer, and most subsequent writers have claimed that it was the natural way for the left hand to write, and this seems to be the correct view. In writing the letter C, for example, with the right

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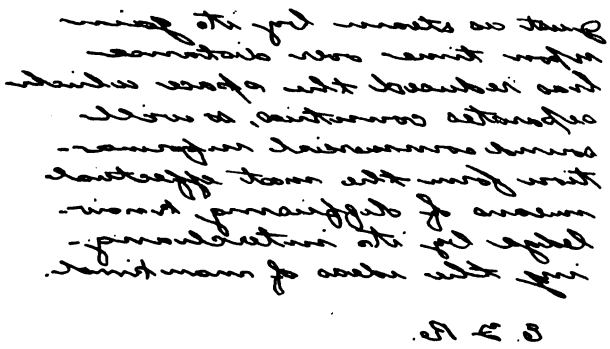
hand and then with the left, in the latter case the same movements of similar muscles will produce ɔ. The production of C with the left hand would involve quite a different set of movements to what are required for doing it with the right hand. A curious error has crept into the literature of the subject on this point, for which Professor C. K. Mills is responsible. He refers again and again [*Journal of Nervous and Mental Diseases*, 1894, page 85] to the image in mirror writing being upside down, and gives the example of C becoming ɔ. This, of course, is a mistake. One does not see oneself upside down in a mirror—one's head still remains uppermost. In swimming, the same curve is described by each arm, and if one carried a piece of chalk in either hand and performed the action against a blackboard, then, with the right hand, he would produce the figure ɔ, and with the left the figure ɔ, *i.e.*, one would be the mirror image of the other.



RIGHT HAND MIRROR.

In a recent discussion which has been going on in the *Lancet* upon right-handedness and left-brainedness (*Lancet*, Vol. ii, 1902, page 1658), Sir Samuel Wilks gives a good example of the same thing. He says, "If the hands and arms be rolled round one another in front of the body the movements are exactly alike, similar muscles are being used, and these are stimulated by corresponding nerves. Now, if the arms be separated and stretched out at the side, the rotary movement still going on, it will be seen that the right is making a right-handed spiral, and the left a left-handed spiral, so that if we put a pen into the hand to write a name it would be done in the usual manner with the right one, but written backwards with the left, as in so-called mirror writing."

It would look as if we got a double impression in the visual centres when looking at an object, that in the right brain being the inverse of that in the left. In ordinary people, the impression in the right brain is so poor that when their left

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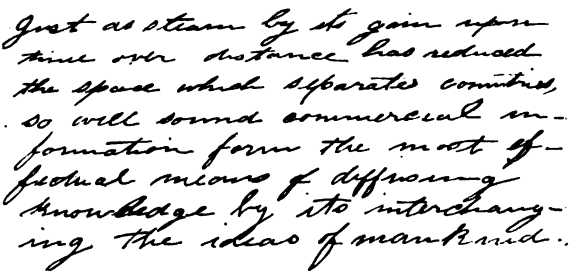
brain is thrown out of action by some lesion, or they are unable to use the right hand from any cause, then they cannot use the very faint impression in the right brain. Instead, when they endeavor to write with the left hand, they slowly and laboriously trace ordinary writing, and the result is usually very imperfect. With long practice, however, it may be improved.

In a naturally left-handed person, on the contrary, the impression in the right brain is good, and, although such an individual has always been forced to write with his right hand, when anything happens to prevent this, then he has the right brain and left hand to fall back upon, and the result is left-handed (or natural) mirror writing. Thus are explained to my mind the numerous cases recorded of right hemiplegia with development of mirror writing. This writing is not a diseased condition, but the (to the patient) artificial form of writing being rendered impossible by the disease, as it would



LEFT HAND.

be by tying his right hand behind the back, he reverts to his natural type of chirography. This is also the view taken by Professor F. J. Allen (*Brain*, Vol. xix, 1896, page 385), himself a mirror writer.

The best historical example of a change from right-handed to left-handed writing, (I quote from Ireland's paper,) "is that of the MS. of the 'Codex Atlanticus' of Leonardo da Vinci, in the Ambrose Library at Milan. It was generally said that in adopting this singular style of writing, Leonardo wished to preserve his work from the eyes of superficial readers; but we can give another explanation. There is a diary in the National Library at Naples of the priest Antonio de Beatis, who, in 1517, travelled in the train of the Cardinal of Arragon through Germany, the Netherlands and France. The Cardinal visited Leonardo da Vinci, who passed the last years of his life in the neighborhood of Amboise, in a villa given to him by Francis I. De Beatis remarks of the famous artist, in his

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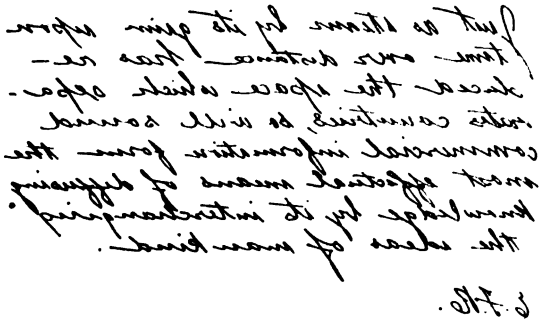
journal, 'that nothing more of value in painting could be expected of him, as he had paralysis of the right hand.' It would appear from this that Leonardo da Vinci, being unable to use his right hand, wrote with his left, and fell into the practice of writing from right to left." One may assume, I think, that Leonardo da Vinci was naturally left-handed.

If an enquiry were made about all cases of right hemiplegia with subsequent sudden adoption of mirror writing, I think it would be found that all these patients were naturally left-handed, or at least ambidextrous. Some interesting experiments were made by school teachers for Dr. Ireland in this connection. In one case the teacher made all his scholars write with the left hand, and five wrote in mirror fashion. These were all found to be left-handed, and they were the only left-handed children in the class of sixty. I had the same experiment made in the Victoria Hospital for Sick Children. Thirty-six



LEFT HAND MIRROR.

children were instructed to write a short sentence with the left hand. All did it in ordinary writing, but enquiry showed that none of them were left-handed.

It is a curious fact that many individuals do not know that they are writing in mirror fashion. Thus Dr. Ireland mentions the case of a boy who, when told to copy the word "wonderful," wrote it with the left hand in mirror writing, and could not see that it was not correct. Evidently his right visual centre was the one that he habitually used and everything was by him seen backwards.

All our brains are dual to a certain extent, and would be more so if parents and teachers did not systematically oppose the use of the left hand. Our legs and the two sides of our faces act equally well because they have always been allowed to do so. I find that I can crudely write in the snow with either foot, and that with the left foot mirror writing comes quite naturally.

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In the discussion in recent *Lancets* on right-handedness and left-brainedness already referred to, Sir William R. Gowers states that it is his opinion that "every child seems to be born either handed, one handedness comes with development, partly from inherited, partly from educational influences." In my opinion the educational influence is the important, if not the only influence. Dr. James Shaw, in the same discussion, states that, by way of counteracting the supposed inherent tendency to right-handedness as well as any uncontrollable external influences in that direction, he has in two instances "by putting articles into the left hand, taught children, who previously did not grasp by preference with either hand, to use it more and better than the right." Having given the start to the left hand, he found it difficult to keep the right hand up to the leader."

Dr. L. C. Bruce ("Notes on a case of Dual Brain Action." *Brain*, 1895, page 54) gives a very instructive history of a case of melancholia in which the two sides of the brain acted at different times. For a time the man would be melancholy, could speak and understand English, and would write in the ordinary way with the right hand. Then a change would occur; he would become noisy and excitable, could only understand and speak Welsh, and his writing could only be executed with the left hand, and would be of the mirror type. What better proof could we have that mirror writing is the natural writing of the left side?

In my patient, as left-handed backward writing was to her the natural form of writing, when she was forced to express herself with her right hand she was made to perform what was to her mirror writing. Having learned this, it was as easy for her to learn right-handed mirror writing as it would be for us to learn left-handed ordinary writing. Then she picked up left-handed ordinary writing as we might acquire right-handed mirror writing. Thus she became provided with four methods of chirography, in all of which she is proficient.

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## CASE IN PRACTICE.

By S. McCALLUM, M.D., Thornbury, Ont.

A short time ago a boy, aged 12 years, was brought into my office about 6 p.m., who a short time before had swallowed a Canadian fifty-cent piece. He had been running with it in his mouth and it happened to get beyond his control. When he came in his mouth was partly opened, the saliva flowing out freely, and his speech much impaired. He could not

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swallow. On making an examination with a head-mirror and reflector the coin could not be seen, so I concluded it must be fast somewhere between the pharynx and the stomach. I passed a stomach tube down into the stomach. This was done without much difficulty apart from the resistance of the boy. Having succeeded in passing the tube I felt certain the coin was no longer in the esophagus, but in the stomach, although the boy still held it was in his throat. After the tube was passed the boy could swallow, and his symptoms seemed much better. The boy was sent home with his father, who accompanied him, with the understanding that if he developed any new symptoms to let me know at once. No medicine or purgatives were given, nor any directions as to diet. The next day at 4 p.m. the father returned and stated the boy had passed the money about one hour before.

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## GLIMPSES FROM THE HISTORY OF MEDICINE.

By H. S. HUTCHISON, M.B., Toronto.

### II. Hippocrates the Great.

Before an intelligent view of the life of the great "Father of Medicine" can be obtained, the task must be engaged in of studying the conditions which existed previous and leading up to his time.

Alike with other peoples of antiquity, the Greeks commenced with a system based on theurgic principles. It seems strangely fantastic and quite confusing the way in which human personalities and deities were intermingled in daily life, and it is hard to make out in what light during his life the principal figure in early Greek medicine, Æsculapius, was regarded. On the whole, however, he seems to have been quite human, and to have been raised to the rank of a god after death. His mother, Corona, being pregnant of Apollo, was condemned to be done away with, and the child was removed by Cesarian section at the very funeral pile. He was, the story goes on, nursed by a goat, and pediatricians delight in referring to this as the first instance of artificial infant feeding.

Æsculapius, though accustomed to use charms freely, was possessed of a knowledge of both internal medicine and surgery, and in this his greatness must have rested. For after his death the famous places of worship, the Asclepeia, were erected to him, and much knowledge culled from experience and observation underlaid the clever trickery that was practised within their walls. These temples were usually beautifully

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situated near natural springs of health-giving waters, and while the onus of failure in treatment was laid at the feet of the patient himself, yet all manner of hygienic and therapeutic measures were adopted.

From these institutions emanated a class of men who, having learnt all possible, separated themselves from priestly offices to take up the regular lay practice of medicine. Thus was constituted the first of the famous series of "schools" of Grecian medicine, the Asclepiads. Fine colleges were erected by them and through their knowledge was kept to a great extent in families, yet by paying a fee, (of great size from our present day standpoint) outsiders were admitted. The teaching was handed down orally from teacher to pupil and was in verse, to help the memory. Boys began the study at the early age of twelve years. The completion of their education was marked simply by the administration of what was first committed to writing in Grecian medicine, the famous Oath.

The contents of this oath should be of exceeding interest, for at an epoch of great enlightenment in the world's history we have its clauses performing services which are accomplished to-day by the severe means of terrifying examinations. After containing much reference to the duty of pupil toward teacher, it passes on to more purely medical requirements. The candidate promises to do always what seems to be to the best advantage of the patient; to give no deadly medicine; to give no woman a pessary to procure abortion; to practice and live with purity and holiness; to do no lithotomies (these were to be left to a special class of workers not considered worthy of much respect); and to keep everything secret in connection with medicine and practice.

And now came the grand blending of philosophy with medicine, the entrance of many of the world's greatest minds into what was sincerely considered the art of healing, and the separation of medical work from its association with things religious to place it upon a pinnacle of independence. The natural result of this freedom of thought was the formation of the different schools. Amongst these the most noteworthy were the Italian school, to which belonged Pythagoras, who first taught the immortality of the soul and decay of the body; the Sophists, who eventually degraded philosophy into a matter of consulting personal advantage; and the Gymnasts, a well-known class who associated actual physical exercises with the treatment of even acute diseases. This latter school was looked down upon by the others, and it was considered by the pure reasoner, Plato, that the union of gymnastics with medicine was a nuisance.

Into this age of golden conditions of existence, into the time

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of Demosthenes, Socrates, Plato, Aristotle, Xenophon, Aristophanes, Phidias, and many other immortals, came, not by any means solely as a product of the times, but as a unique individual to stand forth a tower of strength for all centuries, the great, yet simple character, Hippocrates the Great.

Of the man himself we have too little personal description. Born about 460 B.C., the son of an Asclepiad, taught by his father, then by Sophists, then by Gymnasts, he launched forth into some twenty years of travel to commence a career of respect and fame, to earn early in his life the title of "The Great." Of his private life we can know but little. An interesting point in this connection, however, was his belief in accustoming oneself to irregular strains on the system, and though he strenuously advised a control over the passions, yet for the above purpose he advocates the measure of becoming tipsy once in a while. (It is said of his disciples that they were more faithful in carrying out his teachings in this respect than were they in many others.) His professional bearing was of the highest order, and we have many practical bits of advice from him, such as never to expose those parts which should be covered, to avoid being officious, not to roll up one's sleeves like an athlete. His knowledge of human nature was keen, and here again we have much wisdom handed down for our use. Thus he tells us to win the admiration of patients and says that this is best done by good diagnosis and prognosis. He possessed a desire for pure knowledge and was anxious to do his duty by his fellow-men. "Where there is love for art there is love for man."

The knowledge of Hippocrates was underlaid by the following general belief. Four elements were the basis of all life, fire, air, earth and water. The reaction of these upon each other, with the help of innate heat, was the essential for preservation of life, while the evaporation of heat and consequent cessation of the above co-operation caused death. The circulation of air in the vessels was also essential to life, and the blood was supposed to run only from centre to periphery. Disease took a natural course of three stages, crudity, coction, crisis. Crudity corresponded to the degeneration of the body fluids, coction to their preparation for evacuation, and crisis to their evacuation. Failure of this last process to occur caused incurability or chronicity.

With this foundation of theory Hippocrates selected, as the practical opportunity for human skill to be brought to bear advantageously on disease, the period in a case immediately preceding crisis, and with a view of bringing about this phenomenon was able to use, through his own efforts, wisdom and an exact knowledge acquired through methods which have been the great pattern of all medical endeavor since.

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# Clinical Note.

## HERPES GESTATIONIS.

By HELEN MacMURCHY, M.D., Toronto.

This is a somewhat rare disorder, "characterized by multiformity of lesion and exce-sive itching,"* which may occur at any time during the last six months of pregnancy, or may appear a few days after parturition has taken place. No reference occurs to it in many of the text-books on obstetrics.

Clinically, it bears a marked resemblance to dermatitis herpetiformis,† the eruption having a tendency to appear first on the limbs. There is usually little interference with the general health, although sometimes febrile symptoms are observed. The most troublesome symptom is the burning and itching from which the patient suffers, and the affection is usually difficult to cure before parturition but often disappears shortly after that event.

The following case occurred in the dispensary of the Woman's Medical College, Toronto, September 20th, 1902: Mrs. S., aged 38 years. The eruption first appeared in July, 1902, and was copious, multiform in character, but consisting chiefly of small vesicles, hot, irritable and itchy, placed upon an erythematous base. The lower limbs were almost covered with the eruption, and small ulcers had formed in many places. There were also areas where the healing process had occurred.

The patient's second child, a boy 2½ years old, was suffering at the same time from an attack of impetigo contagiosa, probably parasitic in origin, although a careful examination failed to confirm this opinion. It was at first thought that the two cases might have a common origin, but the difference in the character of the lesions (which in the child lacked the multiformity, the vesicular type, the erythematous base and the sensations of burning and itching), and also the difference in the clinical course, seemed to justify the diagnosis of herpes gestationis in the case of the mother.

The treatment given was for the child frequent bathing with boracic lotion and the application of weak sulphur ointment twice a day, and for the mother a lotion of linseed oil, carbolic acid and lime water, applied frequently. On October 12th the child was quite cured, and the mother somewhat improved.

On November 1st labor occurred, following a normal course, and almost immediately after labor the skin lesions disappeared. When I last saw the patient, on November 23rd, only some redness of the skin remained to mark the places where the lesions had been most numerous. The patient gave no history of similar attacks during the two previous pregnancies.

* Diseases of the skin. Malcolm Morris.
† Duhring and others consider Herpes Gestationis and Dermatitis Herpetiformis identical.

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# Selected Article.

## THE LORENZ METHOD.

BY HENRY LING TAYLOR, M.D.
Professor of Orthopedic Surgery, New York Post-Graduate Medical School and Hospital.

There appears to be some danger that the scientific value of Professor Lorenz's recent demonstrations may be obscured by the exploitation of the picturesque and popular aspects of his trip, or at least that professional judgments may be influenced by matters having little to do with the actual merits of the method.

Personal observation of Prof. Lorenz's work in New York has convinced the writer that previous to these demonstrations, the Lorenz method for bloodless reposition of the congenitally dislocated hip was practically unknown among us. While many bloodless reductions have been performed and many successes reported, the writer has never seen so much force used as is applied by Prof. Lorenz, nor has he seen it applied in the same way, nor the correction carried so far. In order to properly judge of the method, it should be done as it is done by its originator. From the perfectly frank admission of Prof. Lorenz, as well as from some of his reported experiences in this country, the operation cannot be said to be entirely void of danger, though the shock is moderate and the lacerations are soon healed. Used with judgment by experienced hands, the dangers appear to be moderate, but in the hands of the inexperienced or incautious, they may prove serious. From this cause, as well as from imperfect after-treatment, a strong reaction from the present popularity of the method seems not improbable, for which the originator will be in no way responsible. The brilliancy of the operation in the hands of such a master of manipulative technique, and the good results expected should not blind us to some of the apparent defects of the procedure, nor make us forget that a detailed analytical report of ultimate results is still wanting.

"Dry surgery" or "bloodless surgery" is a mere catchword, the important point being that our surgery should be at once scientific and practical, safe and appropriate. Where these conditions are fulfilled it does not matter much in the present state of the art, whether the method be dry or wet, tearing or cutting, manipulative or incisive, and if this particular procedure is generally adopted it will not be because it is dry, but because



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in spite of the great force and extensive lacerations necessary, it fulfils the indications. Extraordinary as are the immediate results of the operation within the limits prescribed, and impressive as are the genius and personality of its originator, one cannot help wondering whether this is the last word of surgery, or whether at least in the more difficult cases, it may not be found to be more workmanlike and no more dangerous to cleanly incise tendons, and to readjust by the open method the capsule and bone when necessary.

Prof. Lorenz's ideas in regard to this and other orthopedic problems are marked by boldness, thoroughness and originality, and his influence upon the work in this country will be profound and for good, whatever the fate of any particular procedure.

Those who come into personal contact with Prof. Lorenz are inevitably impressed with his directness, simplicity and courtesy. He has that indefinable something called charm. His mental equipment, experience and skill are of the highest order, and to these he adds a poise that is rare indeed. His method for the bloodless reduction of congenital hip dislocation is a great advance on the means previously at our command, and it has deserved the hearty and prompt recognition which it has received, but that it perfectly meets all the requirements of the case, or that no further advances will be made may well be doubted.—*The Post-Graduate.*

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# Progress of Medical Science.

## LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

### The Use of Paraffin for Sunken Noses.

Stephen Paget (*British Medical Journal*, January 3rd, 1903), in a lecture to post-graduate students, gives a *resumé* of the history of the use of paraffin in the treatment of saddle-nose since its introduction by Gersuny, of Vienna, in 1899. Prior to this, however, Gersuny had used it in four different cases in other parts of the body. In his first case, that of a young man, he injected melted paraffin into each side of the scrotum to assume the place of testicles removed by castration, and to enable the man to pass the medical examination required for admittance to the army. The second and third cases were to lengthen the soft palate after operation for cleft. The fourth was to raise a sunken cicatrix. Then came the fifth, the first one to raise the sunken nose. Each of these cases gave a good result.

Being so apparently successful in its use, many other men have followed his example, and have used it with more or less success in correcting deformities and restoring functions in different organs of the body.

Paget himself has confined his use of paraffin to correcting the deformity of sunken bridge of the nose, and has already treated twenty-six cases.

The only object of this treatment in saddle-nose cases is cosmetic—to improve the personal appearance of the individual; and it is claimed, when properly conducted, that the injection of melted paraffin beneath the skin of the depressed nose will accomplish much toward the desired end.

Paget's method of treatment is the following: The patient, instruments, etc., are prepared aseptically as for any other operation. Two assistants are required. An anesthetic is administered. Meanwhile the paraffin, in a suitable syringe covered by rubber sheeting, except the pointed half of the needle, is kept in a water bottle six or seven degrees higher than the melting point of the paraffin. The skin is nicked and the needle, first dipped for a second or two into boiling water, is passed well under the skin, a little to one side of the middle line, below the point where the bridge ought to be, and directed upwards. The injection—the instrument holding several c.cms.—should be at the rate of 1 c.cm. every ten

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seconds. The assistant keeps up firm pressure all round the nose with his fingers, and by the use of a soft metallic ring. Cases differ in the amount of paraffin required, and surgeons differ in the melting point of the paraffin used. Paget prefers the melting temperature to be 110° to 115° Fahr.

The paraffin begins to set in less than a minute, but it remains doughy for about quarter of an hour. Hence the moulding to the required shape should be done at once and pretty vigorously, and must be continued until the paraffin has become hard and incompressible. The patient is put to bed, and a cold compress put lightly over the part. When consciousness is restored the patient is given a mirror, and while told to be quiet is instructed to gently mould the nose now and then for several hours in order to get as perfect a form as possible.

Sometimes the work is done at one operation, sometimes at two or more. Another thing, the paraffin invariably shrinks a little on cooling, so that a few drops may be required to be inserted later.

There is always a certain amount of soreness, and occasionally persistent redness after the operation. But both in the end subside.

The chief dangers to be guarded against are the possibilities of resultant embolism, and too large injections of paraffin.

Although the general results in a large majority of cases operated on have been satisfactory, and there have been no fatal issues; it has yet to be proved how well the treatment will stand the test of time. In closing, Paget says: "Only let nobody think that the method is so easy as it sounds. It is full of little difficulties; it wants experience, and it involves very grave responsibility."

### Mucous Polypi of Posterior Naso-Pharyngeal Wall.

Lavrand (*Journal des Sciences Medicales de Lille*, October 18th, 1902) reports a case occurring in a girl aged 12 years. She was operated on for adenoids. The amount removed was small, which led to further examination, when a mass of mucous polypi were found hanging from upper part of post-pharynx. They were removed one by one. The condition is rare; no similar cases having been reported.

### Treatment of Congenital Cleft of the Palate.

J. F. McKernon (*Transactions of American Laryngological Association*, 1902). The writer differs somewhat in operative technique from many authorities upon this subject. Prior to operating on the cleft he invariably performs tracheotomy, and the tracheal tube is worn continuously for ten or twelve days

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after the palate operation; or until food can be taken by the mouth. During the whole of this period the patient is sustained by nutrient enemata. Still, from the third day onwards, at the time of dressing this throat, a glass of warm peptonized milk is given, to be followed by another of sterilized water to cleanse the parts.

In operating, chloroform is the anesthetic preferred, to be administered through gauze over the tracheotomy tube, after the throat pad has been placed in position. The Smith's gag is used, as it contains a tongue depressor and is self-retaining. A large thick wad of sterilized gauze, with a string attached, is then placed below the base of the tongue, covering the entrance of larynx and esophagus. This prevents blood, solutions, etc., from getting into these passages. Several similar pieces of gauze should be held in readiness in case of emergency. The next step is to thoroughly cleanse the face, nasal passages and mouth, with warm boric acid or common salt solution.

The operation itself does not differ materially from the one ordinarily followed. After the operation is over the mouth is washed again with saline solution, and the throat pad replaced by a new one. A strip of sterilized gauze is placed between the palate and the post-pharyngeal wall, the lateral incisions are also packed with the same material; and finally, the whole operative field, including the mouth to the teeth, is carefully filled with the gauze, pressing rather firmly against the under surface of the new palate, and the jaws closed with bandages.

By this means the patient breathes through the tracheotomy tube, and being fed by enemata, the wounds are kept as still as in any other region of the body.

The packing should be removed for the first time at the end of twenty-four hours; the parts washed with a hot saline solution or sterilized water, and then repacked as before. After this the dressing should be repeated daily while required.

The routine followed after operations has been to place the patient in bed in a room with a constant temperature of at least 80 Fah. for three or four days at least. A steam kettle is kept constantly going, and over the end of the tracheotomy tube is placed a piece of gauze, moistened with a saline solution, which is changed every two hours.

Of twenty-four cases operated upon in this manner sixteen were closed by primary union in both hard and soft palate. The remaining eight were more or less failures. Still, the results were far more satisfactory than in cases where mouth breathing and oral alimentation had been allowed, as in these, efficient support and packing of the palate had to be dispensed with.

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### Successful Removal of Epithelioma of Soft Palate.

J. F. McCan (*New York Medical Journal*, August 1902) gives a report of the successful treatment of this case by a combination of methods. The growth was very large, involving the uvula and nearly the whole of the soft palate. A portion of the tumor was removed under anesthesia by the electro-cautery knife, stripping it as much as possible from the posterior pillars and soft palate. Then the ulcerated areas on the pharyngeal wall were curetted.

On subsidence of irritation the Roentgen rays were used three times a week, the sittings varying from twelve to fifteen minutes. They were continued for seven weeks. Improvement in condition commenced at once; but owing to smarting which the rays occasioned, accompanied by dizziness, the treatment had to be suspended for a time. The parts had all healed but a small spot on posterior surface of the palate.

Three weeks later the growth had commenced to extend. Under chloroform it was again curetted and cauterized with the electric knife. After this the Roentgen ray treatment was resumed. The applications, as before, were made three times a week and continued for five weeks.

On final examination the ulcer was entirely healed; scar tissue was almost unnoticeable, and the restoration of the freedom of the palate perfect.

### Large Laryngeal Myxoma.

Delobel (*Jour. des Sciences Medicales de Lille*, Nov. 15th, 1902) reports the history of a case occurring in a woman aged 27 years. The tumor was easily removed under local anesthesia, with complete relief to the asphyxia. Examination proved the growth to be a myxoma—a very rare condition to be found within the laryngeal cavity.

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## OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN AND J. O. ORR.

### Care of Eyesight of School Children.

G. C. Eggers (*Medical Age*) has an instructive article on the Care of Eyesight of School Children, which may be thus abstracted. The faculty of vision is, without doubt, the most valuable and highly prized of all the senses. A child who is suffered to grow up with a defect of vision suffers much in its mental development. Many apparently dull pupils are such only because they are victims of defective eyesight.

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The Illinois State Board of Health deemed it essential that some action should be taken to protect the sight of the school children of the State, and a committee was appointed to consider the matter. On inquiring into the condition of the children in Chicago schools it was found that 32 per cent. of the boys, and 37 per cent. of the girls had defective vision. The committee strongly urged, in its report, that the eyes of the children in every school in the State should be examined in a similar manner to the Chicago plan. By this plan a brief and simple examination is made of each child's eyes and ears once a year by the teachers. The proper test cards are furnished to the teachers, and they are instructed how to use them. If the child's eyes or ears are found to be seriously defective a printed card of warning is sent to the parents, who will generally see that the defect is remedied. Children will frequently return from school complaining of headache, and upon inquiry we learn that they can with difficulty see the work upon the blackboards. Some, who can see the work in the early part of the day, can not see it later in the day, because the ciliary muscle is overtaxed, causing symptoms of eye strain, and, in some cases, squint. Most of the cases spoken of could be detected by the simple tests above mentioned.

**Ocular Manifestations in Chronic Bright's Disease.**

G. E. DeSchweinitz (*Medicine*) discusses the Ocular Manifestations in Chronic Bright's Disease. He recognizes seven of these conditions. They are:

1. Complete blindness without ophthalmoscopic lesions, or at least without the presence of lesions more or less suggestive of disease of the kidneys, generally called uremic amaurosis, and most often seen in acute nephritis, but also in acute exacerbations of chronic renal disease.

2. Various types of retinitis and neuroretinitis, to which the descriptive term "albuminuric" is commonly applied, and which are most often seen in association with chronic forms of kidney disease.

3. Alterations in the calibre and relation of the retinal vessels owing to sclerotic changes in their walls, with or without hemorrhages and exudates in the retina, seen in association with those forms of renal disease in which vascular changes are evident elsewhere in the body; also isolated hemorrhages and exudates, without marked vessel-wall changes.

4. Alterations in the uveal tract, particularly in the choroid and iris.

5. Some varieties of cataract.

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6. Paresis and paralysis of the ocular muscles, particularly the superior oblique and the external rectus.
7. Recurring subconjunctival hemorrhages.

**The Prevention of Blennorrhea in the Eyes of the Newly Born.**

Prof. G. Leopold (*The American Journal of Ophthalmology*) discusses the question as to whether Crede's method (the use of nitrate of silver) should be made obligatory.

It seems to me, he says, it is high time this should be done. Its benefits should be given to every one.

There will be hardly any serious objections to its introduction into private practice. If in any case the infant's father should object, it can, of course, not be enforced; yet the statements as to the possibilities of a serious eye disease will in some cases be sure to overcome the objections, while, in others the method must be omitted. Then the law under which the midwives must report all infected cases, must see to it that the quickest and best possible aid is furnished the diseased eyes.

As to the bitterly-contested point, whether nitrate of silver should be retained for these instillations or another and less irritating remedy be substituted, I, with Runge, Fehling and Gusserow, maintain that nitrate of silver—and in order to remove its irritating qualities, in a 1 per cent. solution—leaves nothing to be desired with a view to safety, inocuousness and simplicity.

In 191 infants 1½ per cent. silver nitrate solution was used, it gave brilliant results, no irritation, no blennorrhea. I intend from now on to employ a 1 (one) per cent. silver nitrate solution, and I expect no irritation and certain prevention.

*Postscriptum.* From April 2nd to July 31st, 1902, silver nitrate solution of 1 per cent. was instilled into the eyes of 698 infants. No early infection was observed, and but one late infection. No irritation appeared. J. T. D.

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# Editorials.

## TESTIMONIAL TO DR. RICHARDSON.

The old students of Dr. Jas. H. Richardson, of Toronto, are making arrangements to hold a banquet in his honor some time in April next. They hope also to have ready at that time a portrait in oil of Dr. Richardson, which will be presented to the University of Toronto. The following committee have the matter in charge: Drs. Bascom, Oldright, Ellis, Wright, Cameron, Ross, Aikins, Cotton, Cleland, Duncan, King, Caven, Peters and Amyot. A circular letter has been issued on behalf of the committee by Dr. Amyot, the Secretary-Treasurer, to the graduates, asking for subscriptions of five dollars each which will include admission to the banquet, or three dollars towards the portrait fund alone.

Dr. Richardson was born at Presqu' Isle in 1823. He commenced his medical studies in 1841, with Dr. Rolph, then living in Rochester, N.Y. In 1843 he attended the first course of lectures in the new medical faculty of King's College. In 1844 he went to England and studied in Guy's Hospital for three years, with the exception of a part of 1846, when he studied in Paris. After obtaining the diploma of the Royal College of Surgeons, England, in 1847 he returned to Canada, and commenced practice in Toronto. In 1848 he became M.B., King's College. In 1850 he was appointed Professor of Anatomy in the Medical Faculty of the University of Toronto, and held that position until 1853, when the Medical Faculty was abolished. A few years later he accepted the Chair of Anatomy in the Toronto School of Medicine, and the same Chair in the University of Toronto Medical Faculty in 1887. Three years ago he gave up active work as a teacher, and was made Emeritus Professor. Although now in his eightieth year he is hale and hearty, and still a lover of out-door sports, being actively engaged in bowling and fishing in summer and curling in winter. We hope to see a very happy reunion between "the boys" and their beloved teacher in April.

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## THE AMERICAN MEDICAL ASSOCIATION.

The American Medical Association has prospered to such an extent during recent years that it now worthily represents the medical profession of the United States. That this was not the position of the society from ten to fifteen years ago is generally recognized in this country. We in Canada rejoice with the physicians of the American Republic in the growing prosperity of their great national medical association. The present happy condition is due largely to the increased harmony existing amongst medical men in all parts of the Union, the great executive ability shown by its officers, and the excellence of the official journal of the Association.

The next meeting of the Association will be held in New Orleans, La., May 5th to 8th, under the presidency of Dr. Frank Billings, of Illinois. Special addresses—called orations—will be delivered as follows: Medicine, Dr. J. M. Andus, of Philadelphia; Surgery, Dr. A. F. Jones, of Omaha; State Medicine, Dr. Wm. H. Welch, of Baltimore. It is quite needless to tell our readers that Canadians who attend this meeting will receive the same sort of kindly and hearty welcome which has invariably been extended to our countrymen in the past.

## MEDICAL LEGISLATION IN MICHIGAN.

A bill has been introduced in the State of Michigan Legislature with the object of giving the Board of Registration greater authority in passing upon the qualifications of physicians who seek to practice in Michigan. It is said that the physicians of that State wish to build around them a wall similar to that which has so long surrounded Ontario. They have found that on account of the high standard of examination in the Ontario Medical Council a number of Canadians, educated in Ontario and frequently graduated from Ontario universities, have not passed the Council examinations, but have commenced practice in Michigan, becoming enregistered there as licensed physicians on presentation of their *parchments*.

When the proposed Act is passed (as expected) the Board of Registration will probably have the power to enact regulations

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compelling outside graduates, especially those from Canada, to spend at least one year at a recognized medical college before being allowed to go up before the State Board of Examiners. We in Canada have no cause for complaint even though such legislation be chiefly directed against us. We should be sorry, however, to see each State of the Union legislate for itself alone without arranging for some sort of reciprocity, or the granting of a license which would cover the whole of the United States. Americans should have some central body with power to grant a license for their whole country. We want a similar condition in Canada, and shall have it if Dr. Roddick's Dominion Act, as passed last session, is accepted by our different provinces.

## A LECTURER ON MEDICINE FOR FIFTY YEARS.

Dr. Uzziel Ogden, of Toronto, completed his fiftieth year as a lecturer on medicine at the end of 1902. The Dean of the Medical Faculty of the University of Toronto gave a dinner in the Faculty Union to do honor to Dr. Ogden on account of this remarkable record. It was purely a private function, with a limited number of guests. There were present some of his former colleagues in the Toronto School of Medicine, including, in addition to the Dean, Dr. R. A. Reeve, Drs. Jas. H. Richardson, Wm. Oldright, Wm. Ogden and A. H. Wright; many of his former students, including Drs. Jas. White (of Hamilton), Albert Macdonald, Irving Cameron, George Peters, Alexander McPhedran, Charles J. Hastings, Jas. F. W. Ross, Wilberforce Aikins and W. H. Ellis. Drs. Daniel Clark, James Thorburn, Moses Aikins, Cassidy, Jas. M. MacCallum, and some others were unable to attend. A very enjoyable evening was spent and very interesting speeches were delivered by the Dean and Drs. Uzziel Ogden, Richardson, Wm. Ogden and others.

Dr. Ogden commenced to lecture in the Toronto School of Medicine in January, 1853. He held the Chair of Materia Medica and Therapeutics from this time until 1870, when he was transferred to the Chair of Obstetrics and Gynecology. At the time of the re-establishment of the Medical Faculty of the University of Toronto in 1887, he was asked to take either

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obstetrics or gynecology. He chose the latter, and was Professor of Gynecology from 1887 to 1903. After completing fifty years as a teacher of medicine, he decided to give up active college work, and tendered his resignation to the University authorities.

In his younger days Dr. Ogden was considered somewhat delicate. Since he commenced practice, however, in 1849, he has done an immense amount of work. He has always been in the harness, and had a laborious and remunerative practice for more than forty years. Although he gave up a portion of his work a few years ago, he still has a fairly large practice. As a lecturer he shone especially as a teacher of midwifery—being undoubtedly one of the best on the continent. He was always a great reader, both of medical and general literature. It may surprise many of our readers to be told that he was the first editor of the medical journal now called the CANADIAN PRACTITIONER AND REVIEW. When it was first published in January, 1876, under the title of the *Canadian Journal of Medical Science*, Uzziel Ogden was the editor, and Richard Zimmerman the corresponding editor. We tender our hearty congratulations to Dr. Ogden for his record in the past, and our best wishes for his welfare in the future.

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## MEDICAL FACULTY UNIVERSITY OF TORONTO.

At a meeting of the Faculty, February 6th, the following resolution was passed unanimously:

"In view of the announcement recently made of the resignation by Dr. Uzziel Ogden, after fifty years of continuous medical teaching, of the Chair of Gynecology in this University, this Faculty deems it fitting to commemorate in perpetuity upon its minutes the interesting fact of this unusually long period of active service in the cause of medical education. And although during the greater part of this time Dr. Ogden was a teacher in the Toronto School of Medicine, (whose career was, for the most part, closely identified with this University) yet for the last seventeen years his labors have been expended solely within these halls, and it affords the members of this Faculty much pleasure to record their deep appreciation of his

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indefatigable industry and untiring zeal in the discharge of the duties of his Chair. They owe him, also, a debt of gratitude and thanks for his solicitous care and skilful management of the affairs of the Faculty during his occupancy for three years of the office of Dean, the notable progress of the Faculty during which period he may perhaps regard as a satisfactory reward for his labor of love. While Dr. Uzziel Ogden's immediate connection with this University was through the Chair of Gynecology, yet in view of the fact that a majority of his recent colleagues had been in the past students of his in the Departments of Midwifery and Materia Medica and Therapeutics, it is not inappropriate in testimony of his versatility and attainments to make mention here of his well recognized success as a lecturer and teacher in these branches also. To impart many of the facts and theories of medical science to successive generations of students for half a century, and to impress upon them the indelible, though unconscious, stamp of high example in life and character is an opportunity for usefulness and a sphere of influence vouchsafed to few, and in saying 'farewell' to Professor Uzziel Ogden his colleagues in the Faculty of Medicine in the University of Toronto extend to him their heartiest congratulations upon the attainment of his Jubilee, their sincere appreciation of his faithful service, their kind remembrance of his comradeship and leadership, their deep sense of his high example, and their earnest hope that his great improvement in health may long continue, so that his days of the lengthening shadows may be passed in well earned rest, peacefulness and happiness.

"The Faculty also ventures to record the hope that the Senate and the Governor-in-Council may be graciously pleased, in acknowledgment of his long, arduous and faithful service, to call Professor Uzziel Ogden to the *otium cum dignitate* of the Emeritus Professorship."

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# Personals.

Dr. W. F. McKay, of Beaverton, has commenced practice in Arnprior.

Dr. J. G. McKee has removed from Chicago to Sturgeon Falls, Ont.

Dr. F. J. C. Fitzgerald has removed from Woodstock to St. Catharines.

Dr. Bryce McMurrich, of Bothwell, spent his Christmas holidays in Toronto.

Dr. Houston Irwin has removed from Warren, Algoma District, to Pembroke.

Dr. Thomas S. Cullen, of Baltimore, visited Toronto during the Christmas holidays.

Dr. W. H. B. Aikins, of Toronto, spent a week in New York early in January.

Dr. A. Primrose, of Toronto, paid a short visit to Nova Scotia early in January.

Dr. J. E. Elliott has been elected chairman of the Toronto Collegiate Institute Board.

Dr. John T. Fotheringham, of Toronto, spent a week in Ottawa, January 5 to 12th.

Dr. Thos. B. Hewson, of Colborne, has recovered from his recent attack of pneumonia.

Dr. R. J. Wilson, of Toronto, has recovered after an illness of six weeks with typhoid fever.

Dr. A. C. Bowerman, at one time practising at Bloomfield, Ont., has removed to Brentwood, Cal.

Dr. Charles N. Laurie, formerly of Pottersburg, County of Middlesex, has removed to Port Arthur.

Dr. Wm. Oldright, of Toronto, and his son, Dr. Harry Oldright, of St. Catharines, returned home, January 23rd, after a cruise among the West India Islands.

Drs. Gibb Wishart and Harold Parsons, of Toronto, recently spent a holiday in St. Catharines, being domiciled in the Welland Hotel.

Dr. George W. Badgerow, of Toronto, has passed the examnations for the double qualification of M.R.C.S. Eng., and L.R.C.P. Lond.

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Dr. George McDonagh, of Toronto, left home, February 9th, on a trip to the West Indies. He expects to return about the middle of March.

Dr. C. P. Jento, after practising for a time in California, where he became much improved in health, has returned to his former home, London, Ont.

Dr. Perry G. Goldsmith has been appointed Consulting Surgeon on diseases of the eye, ear, nose, and throat, in the Deaf and Dumb Institute, Belleville.

Dr. David Jamieson, M.P.P., of Durham, County of Grey, has quite recovered from his recent attack of appendicitis, for which an appendicectomy was performed.

Dr. A. H. Montgomery (Tor. '01) is practising in New York City. He is also acting as one of the assistants in Anatomy at the senior branch of Cornell Medical School.

Dr. James M. MacCallum, of Toronto, spent a short holiday in Hamilton, Bermuda, and returned to his home during the latter part of January, with health much improved.

Dr. Moore, of Brockville, and Sir James Grant, of Ottawa, visited Sir Frederick Borden, January 24th, and presented him with the parchment which certifies that he is now an honorary Licentiate of the College of Physicians and Surgeons of Ontario.

Dr. W. J. Bell, of Toronto Junction, is now surgeon to the C.P.R. Steamship *Empress of Japan*. Before leaving home his fellow-citizens of the Junction entertained him at a banquet on New Year's Eve and presented him with a handsome gold watch, chain and locket.

Dr. Gilbert Gordon, of Toronto, became seriously ill in the latter part of January from some obscure form of peritonitis. A laparotomy was performed early in February. At the time of writing he is improving and his physicians hope for a fairly speedy recovery.

At a recent meeting of the Trinity College Medical Society Mr. Brefney O'Reilly, the Secretary, read an address of welcome, presented by the Society, to Dr. Charles B. Shuttleworth, Associate Professor of Anatomy, who has just returned from England, where he obtained the Fellowship of the Royal College of Surgeons.

The Council of the Ontario College of Pharmacy at a meeting, February 6th, made the following appointments to fill the vacancy in the working staff through the death of Dr. A. Y. Scott: Lecturer on Botany, salary $700, Dr. Paul L. Scott; Demonstrator of Practical Chemistry, salary $900, Mr. George Evans, druggist, 832 Yonge Street, Toronto.

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We learn from the daily press of Toronto that it was officially announced after a meeting of the Board of Directors, held February 7th, that it had been decided by an unanimous vote to appoint Dr. J. Orlando Orr, Secretary and Manager of the Toronto Industrial Exhibition, although he had made no personal application for the position. The salary during the first year will be the same as that paid to the last manager, $3,000 per annum. Dr. Orr has for many years taken a very active interest in the exhibition, and largely contributed to the success of last year's meeting by his untiring work. There is a general consensus of opinion that the Board has been particularly fortunate in securing the services of Dr. Orr as manager at this important time in the history of the Exhibition.

# Obituary.

## THOS. McILWRAITH.

Mr. Thomas McIlwraith, the well-known ornithologist of Hamilton, and father of Dr. Kennedy McIlwraith, of Toronto, died January 31st, aged 79.

## RICHARD S. MARKELL, M.D.

Dr. Richard S. Markell, a Canadian, and a graduate of McGill, 1867, died at Cloverdale, Cal., where he had practised, January 10th. He was a native of Cornwall, Ont.

## COLIN McPHAIL, M.D.

Dr. McPhail, of Summerside, P.E.I., died December 3rd, aged 40. He received his medical education in Trinity Medical College, Toronto, graduating from Trinity University in 1892. He was Vice-President of the Canadian Medical Association for his province.

## ALEXANDER SCOTT, M.D.

Ontario lost two Alexander Scotts in January—Dr. Scott, of Toronto, who died January 3rd (as recorded in our last issue), and Dr. Scott, of Forest, who died January 20th. Dr. Scott, of

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Forest, attended lectures in the Toronto School of Medicine, and graduated from the University of Toronto in 1872. After graduating he went to Edinburgh, where he received the double Physician's and Surgeon's qualification. After returning from Great Britain he commenced practice in Forest, and remained there almost without a holiday until the day of his death. He died suddenly in his office, January 20th, aged 62. He was successful in practice, and highly respected by all classes in and about the Town of Forest.

## DAVID MUNRO, M.D.

Dr. Munro, of Perth, died suddenly February 6th, aged 61. He was graduated from Queen's University in 1867. He practised in Lanark village until 1882, when he went to Winnipeg. After remaining there a few months he returned to the East and commenced practice in Perth.

## HENRY WRIGHT DAY, M.D.

Dr. Day, Registrar of the County of Hastings during the last ten years, was for a long time one of the most prominent physicians of Central Canada. He received his medical education in Kingston, and received the degree of M.D. from Queen's University in 1859. After graduating he settled in Trenton, and had a very large practice in that town for more than thirty years. He was a member of the Ontario Medical Council from 1869 to 1872, and from 1881 to 1895, and was President in 1884-5. He was always recognized as one of the ablest men in the Council. He possessed marked ability, great force of character and tremendous energy. As a citizen of Trenton he took a prominent part in all matters pertaining to the welfare of the community. He was for many years Chairman of the High School Board, for two years mayor of the town, and was once the Liberal candidate for the Dominion Parliament. In private life he was a lovable, genial and generous man—one of the biggest-hearted men the writer ever knew. After a stroke of paralysis about two years ago he never fully recovered strength. He had another attack January 9th, and died on the morning of the 11th, aged 72.



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# COUGHS AND THEIR TREATMENT.

By DRS. ALEX. DE SOTO AND C. W. CRIMPTON,
Of Wayside Mission Hospital, Seattle, Wash.

An intractable cough! What condition so persistently tries the patience of every physician? Careful examination has been made, the diet regulated, and one of the innumerable prescriptions for that ailment selected, but still the cough continues. Then more investigation, and more careful prescribing; but still after weeks that familiar cough re-echoes through your waiting room, and you wish Mrs. Smith would change her doctor. No such good fortune attends you, and that cough haunts you as dismal thoughts of phthisis do your patient, until you are almost determined to advise a change of climate.

It is not the object of this paper to go into details regarding the only too well known disadvantages of most of our familiar cough mixtures. Down to that household standby, "cod liver oil in every form," they have proven in the vast majority of instances discouraging failures. The above-mentioned remedy, which the patient considers proof-positive of the doctor's having made a diagnosis of consumption, may invariably be depended upon to disarrange the digestion at least. Cod liver oil, once begun, must frequently be continued throughout the entire winter season. Nor can it be shown that the ingestion of fats and oils into the system, to become oxydized when coming in contact with the oxygen in the lungs, ever does more than raise the local temperature by combustion. Although this may prevent cold in comparatively healthy lung tissue, its therapeutic (?) effect on the inflamed pulmonary structure may be described as positively harmful.

Cough is a symptom, varying in intensity and character according to its cause. Nor is that cause always situated within the respiratory organs themselves. Cough is essentially a reflex act depending upon an irritation of the respiratory centre. These sources of irritation may be subdivided as follows: Dropping of mucus from the posterior nares in chronic catarrh. Polypi, enlarged uvula or tonsils, defective closure of the glottis, irritations within the larynx from whatsoever cause, malignant or otherwise. Bronchitis, pneumonia and pleurisy. Gastric when due to derangements of the stomach. Cardiac disease, irritations of auditory canal and organic diseases within the abdominal cavity.

From the foregoing causes it may be readily estimated that to arrive at the exact nature of any given case may not always be an easy matter. Nevertheless, we must relieve the patient, without risk of disturbing either digestive or circulatory

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systems. Any remedy which will attain this object in a goodly number of cases is, indeed, a Godsend to patient and physician, and in every sense an ideal remedy. Not until our attention was called to glyco-heroin (Smith) did we become acquainted with a remedy which we have used with a most unvarying success in coughs of every description, and in patients of all ages and conditions, without the slightest unfavorable effect.

The points which recommend glyco-heroin (Smith) are: (1) Palatability. (2) Economy (3 to 4 oz. being ample for a cure of the average case). (3) Its immediate action, soothing the most trying cases. (4) Its absolute freedom from unpleasant or unfavorable effects. (5) It is not only a palliative but a curative agent. (6) The hyoscyamus it contains reaches those trying cases of dry cough due to other causes than simple catarrhal irritation of the respiratory tract.

We are convinced that glyco-heroin (Smith) has no competitors in results, its action being almost specific. It will give satisfaction in every case where results may be reasonably expected, and in many cases its beneficial effects go beyond the most sanguine expectations.

The character of the cases coming to the Wayside Mission Hospital for treatment may be imagined when it is remembered that it is essentially a charity institution; that the vast majority of patients come to us after having tried everything else. These are worthy prospectors and miners, broken in health and pocket by exposure and misfortune. As proof of the above we submit the following cases:

1. D. McK., laborer, 22 years. Had typhoid fever, convalescence much impeded by severe coughing spells, frothy white expectoration, irritable stomach. This condition defies all treatment. There was marked dulness at apeces of both lungs to the third intercostal spaces. Morning temperature normal, resp. 28, pulse 104; evening temperature 101, resp. 36, pulse 120. This condition had persisted for nine days, with progressive loss of strength.

Dec. 16th—Glyco-heroin (Smith) teaspoonful every two hours; a.m., temp. normal, pulse 104, resp. 28; p.m., temp. 101, pulse 120, resp. 36.

Dec. 17th—Slight relief to cough, had some sleep; p.m., temp. 100, pulse 96, resp. 24.

Dec. 18th—Relief marked; p.m., temp. normal, pulse 80, resp. 20.

Dec. 19th—Expectoration free, appetite and spirits better, rapid improvement.

Dec. 20th—Improvement continued, sat up about two hours.

Jan. 8th—Dulness and cough gone, spirits and appetite good, gaining flesh rapidly.

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Jan. 11th—Discharged cured.

2. Feb. 19th—Wm. M. Cook, 52 years. Has had severe cough for last three months, due to cold caught in a typhoon on the China Sea after three days' exposure to cold and wet. Has hardly any sleep, incessant dry night cough. Glyco-heroin (Smith) teaspoonful every two hours.

Feb. 21st—Immediate relief, has had quite a little sleep.

Feb. 22nd—Improvement continued.

Feb. 24th—Slept all night.

Feb. 26th—Has not coughed in forty-eight hours.

Feb. 28th—No return of cough and discharged cured. Is now in charge of the culinary department of hospital.

3. Jan. 23rd—D. A. Coolie, laborer, 48 years. Marked dulness at base of left lung, severe pain and dyspnea. Temp. 102, pulse 104, resp. 40. There was daily chilliness at 11 a.m., followed by temp. of 103⅘ to 104. Expectoration muco-purulent. Emaciated, irritable, and appetite completely lost.

Jan. 26th—Glyco-heroin (Smith) teaspoonful every two hours.

Jan. 27th—Some relief to cough, other conditions same.

Jan. 28th—Free expectoration, all conditions still unchanged.

Jan. 29th—No morning rise of temperature, p m. temp. 102, pulse 96, resp. 32.

Jan. 30th—Seems somewhat better; had a profuse night sweat.

Jan. 31st—Temp. 101, pulse 88, resp. 24. Took considerable nourishment.

Feb. 1st—Temp. normal, pulse 88, resp. 24. Less dulness, no expectoration, cough disappearing. Spirits vastly improved. Said it was his third attack, and that in each former instance he was in bed eleven and eight weeks, respectively. Continued to improve, and was discharged Feb. 26th, well

4. Feb. 17th—J. J., laborer, 19 years, pneumonia third day, dulness of entire right lung. Temp. 103⅘, pulse 120, resp. 60; expectoration prune-juice, very restless and thirsty, slight delirium, glyco-heroin (Smith) teaspoonful every two hours.

Jan. 18th—Temp. 102, pulse 102, resp. 48, much easier.

Jan. 19th—Temp. 100, pulse 84, resp. 36.

Jan. 20th—Temp. normal, pulse 80, resp. 24.

Expectoration has changed, and is feeling much better. Absolutely refused to believe that he had pneumonia. Discharged cured.

5. Nov. 3rd—S. J., a diver, 34 years. Had just been discharged from another hospital where he had been treated for four months for typhoid-pneumonia. Had considerable dyspnea, cough dry, spasmodic, at times slightly frothy expectoration. Temp. normal, pulse 100, resp. 28. Right pleural

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cavity filled to the fourth intercostal space with pleuritic fluid, which could be heard to splash on slight agitation of chest. Appetite poor, and is much dispirited. At five sittings three and three-fourths gallons of fluid were withdrawn by aspiration.

Nov. 6th—Glyco-heroin (Smith) teaspoonful every three hours, has much relieved the spasmodic cough, conditions in general seem to be improving.

Nov. 11th—Cough has almost disappeared. Continued in this condition to Jan. 14th, when two and one-half quarts of fluid were withdrawn.

Feb. 3rd—Complained of pain under scapula and was given a dry hot air treatment followed by violent cough, fever 104⅕, pulse 124, resp. 28, glyco-heroin (Smith) every two hours.

Feb. 4th—Had a hemorrhage and was slightly delirious, the general condition unchanged.

Feb. 5th—Cough almost gone, temp. 101⅖, pulse 82, resp. 21. Is eating some, and feels much better.

Glyco heroin (Smith) has always relieved his cough promptly, and I believe he would have been dead but for its soothing influence. While we do not look to the remedy as a cure for hydrothorax, we appreciate the sedative effect, in which it is superior to morphine, and harmless.

6. Jan. 11th—W. McD., age 18, measles thoroughly developed, temp. 103 2/5, violent cough, yellow expectoration, cannot find rest because of the cough. Glyco-heroin (Smith) teaspoonful every two hours.

Jan. 12th—Cough is much better.

Jan. 13th—Has not coughed all night.

Jan. 18th—Discharged without return of cough. Entire quantity of glyco-heroin used was four ounces.

7. L. G., age 10 months, Jan. 29th, operated upon for radical cure of right inguinal hernia. On Feb. 6th, although doing well in every way, he was seized with violent paroxysms of coughing (probably due to dentition). The stitches threatened to tear out and the operation prove a failure. Glyco-heroin (Smith), xv guttæ every four hours, completely controlled the cough in five doses, and so saved the case. There were no visible unpleasant effects of any kind whatsoever from the medicine.

8. J. K., aged 22, in hospital one year for tubercular disease in the lumbar region. Jan. 15th, was operated on, and much diseased tissue removed. He developed a violent cough Jan. 16th, which caused him great pain and bleeding in the wound. Glyco-heroin was given, two teaspoonfuls every three hours, with splendid effect. Five doses removed the cough entirely.

9. *Outdoor Cases.*—Mrs. T., depot matron, had a cough that had defied the treatment of several physicians. It was a dry,

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hacking cough, and she had had no sleep in five nights. Completely cured by four ounces of glyco-heroin (Smith).

Mrs. M. had been to several physicians; her case had been diagnosed as phthisis; she was taking one half bottle emulsion of cod liver oil per day. She was also using morphine freely; four ounces of glyco-heroin completely cured her, and she gained at the rate of one pound per day.

Miss E., 17 years, cough four months without relief, was immediately relieved by a few doses of glyco-heroin (Smith).

Mrs. D., distressing cough and some dulness at base of right lung. Her cough completely cured by less than one ounce of glyco-heroin.

McD., aged 36, policeman, had been coughing three weeks, and was getting worse. Four ounces of glyco-heroin completely cured him.

Mr. R., with all symptoms of pneumonia; temp. 104, pulse 126, respiration 40; four ounces of glyco-heroin completely cured him.

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**The Journal of Cutaneous Diseases for 1903.**

Beginning with the issue for January, 1903, *The Journal of Cutaneous Diseases* will be under the editorial management of Dr. James C. White and Dr. John T. Bowen, of Boston; Dr. James Nevins Hyde, of Chicago; Dr. Henry W. Stelwagon, of Philadelphia; Dr. Prince A. Morrow, Dr. Edward E. Bronson, Dr. George T. Jackson and Dr. John A. Fordyce, of New York.

Dr. A. D. Mewborn, of New York, will be the acting editor. The editors will take an active interest in the *Journal*, and by their united efforts hope materially to improve the quality of its contents. It is their desire to present a monthly review of all important advances in dermatology and syphilis, both in this country and abroad.

The *Journal* has been made the official organ of the American Dermatological Association, and will publish in addition to its transactions, the proceedings of all the local societies throughout the country devoted to this specialty.

All communications relating to the editorial department should be addressed to Dr. A. D. Mewborn, 224 West 52nd Street, New York.

The *Journal* will be published by the Grafton Press, 70 Fifth avenue, New York, where all inquiries relating to subscriptions, advertisements, etc., should be directed. The subscription price will be hereafter $3.00 a year in the United States, and $3.50 to other countries in the Postal Union.

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# Miscellaneous.

## ENGLAND'S DRASTIC TEMPERANCE LAW.

The late Archbishop Magee used to declare that—were the choice given to him—he would prefer England free to England sober.

Parliament evidently prefers England sober. Consequently the public must be prepared to find the Licensing Act, 1902, which came into force January 1st, a very drastic measure.

First and foremost, if a person is found drunk in any highway or other public place, whether a building or not, or on any licensed premises, and appears to be incapable of taking care of himself, he may be apprehended and dealt with according to law.

There is a penalty—either a fine or a month's imprisonment—for being found drunk in any highway or in any place, whether a building or not, to which the public has access, whether on payment or otherwise, or on any licensed premises while having charge of a child apparently under seven years of age.

These provisions are a great advance on the law as it stands, which says that a drunken person shall in no case be interfered with by the police, unless he is disorderly and likely to do himself or others injury, or is drunk while in charge of any carriage, horse, cattle, or steam engine. The existing law says nothing about children.

*Married Drunkards.*—Life is henceforth to be made impossible for the habitual drunkard. And, first of all, it may be worth while to point out what a habitual drunkard really is.

"A 'habitual drunkard' is a 'person who, not being amenable to any jurisdiction in lunacy, is, notwithstanding, by reason of habitual intemperate drinking of intoxicating liquors, at times dangerous to himself or herself, or to others, or incapable of managing himself or herself and his or her affairs.'"

By the new act, where such a person is a married man, his wife can apply for a separation order—which order while in force will have the same effect as a decree of judicial separation on the ground of cruelty.

She will be entitled to retain the legal custody of the children of the marriage under sixteen.

Her husband, the habitual drunkard, will have to pay her such weekly sum, not exceeding £2, as the Court shall, having regard to the means both of husband and wife, consider reasonable.

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Where the wife is a habitual drunkard the Court may, instead of making a separation order, order the wife, with her consent, to be committed to a retreat licensed under the inebriates' act.

And now we come to the part of the act which will enable the police to deal more effectively with the lamentable Jane Cakebreads of a future generation.

The police belonging to the district where the Court is are so receive notice of the conviction of any offender under this act, where the court is satisfied that an order of detention could be made.

"If the convicted person within three years after the date of the conviction purchases or obtains, or attempts to purchase or obtain, any intoxicating liquor at any premises licensed for the sale of intoxicating liquor by retail, or at the premises of any club registered in pursuance of the provisions of Part III. of this (licensing) act, he shall be liable, on summary conviction to a fine not exceeding, for the first offense, twenty shillings, and for any subsequent offense, forty shillings."

*Publican's Risk.*—Publicans, wine and spirit merchants, and any persons "selling, supplying or distributing intoxicating liquors, or authorizing such sale, etc.," on the premises of a club registered under Part III. of this (licensing) act, are under an even more onerous liability than the habitual drunkard himself.

"If, within three years of the conviction of such a person, the publican or wine merchant or club manager knowingly sells, supplies or distributes, or allows any person to sell, supply or distribute intoxicating liquor to, or for the consumption of, any such person (habitual drunkard), he shall be liable, on summary conviction, for the first offense, to a fine not exceeding £10, and for any subsequent offense in respect of the same person to a fine not exceeding £20."

The friend who encourages the drunken person to go on drinking also comes in for attention. This section of the act is particularly clear:

"Any person who, being on any premises licensed for the sale of any intoxicating liquor, whether on or off such premises, shall procure or attempt to procure any intoxicating liquor for consumption by any drunken person, or who shall aid and abet any drunken person in obtaining or consuming any intoxicating liquor on any premises so licensed as aforesaid, shall be liable, on summary conviction, to a fine not exceeding forty shillings, or to imprisonment, with or without hard labor, for any period not exceeding one month."

It may be added that the police will be called upon to warn publicans of these convictions, and help, as far as possible, the publican in establishing the identity of convicted drunkards.

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And last, but not least, under this part of the act, where a licensed person is charged with permitting drunkenness on his premises, and it is proved that a person was drunk on the licensed premises, the licensee must prove that he and the persons employed by him took all reasonable steps for preventing drunkenness on the premises.

*Added Difficulties.*—The act also contains some drastic amendments of licensing law which all licensed persons will do well to study.

Among the more important points to be noticed are:

A justice's license will now be required in the case of every excise license for sale of intoxicating liquor to be consumed off the premises. To this section there are certain exceptions.

Licenses are no longer to be indorsed for the purpose of recording convictions, but notice of the conviction is to be entered in a register, and on every application for grant, renewal or transfer regard is to be had for such entries, whether relating to the person or the premises.

The general annual licensing meetings are to be held during the first fortnight in February, instead of in the autumn, as hitherto.

Licensing justices asked to grant an "in" license may require a plan of the premises to be produced, and may order such alterations as they think reasonably necessary to secure the proper conduct of the business to be made in that part of the premises where intoxicating liquor is sold.

An occasional license will require the consent of a petty sessional court, and twenty-four hours' previous notice to the superintendent of police for the district.

*The Check on Clubs.*—So far as clubs are concerned, the act inaugurates an entirely novel mode of treatment.

First and foremost comes the matter of registration. Henceforward every club which occupies a house or part of a house or other premises which are habitually used for the purpose of a club, and in which any intoxicating liquor is supplied to members or their guests, must be registered.

The secretary of every such club must henceforth yearly furnish to the clerk of the justices a return, containing particulars as to the name and objects of the club, the hours of opening and closing, and the rules of the club.

A club may be struck off the register on the ground that the "number of members is less than twenty-five, or that it is not conducted in good faith as a club, or that there is frequent drunkenness on the club premises, or that illegal sales of intoxicating liquor have taken place on the club premises."

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Other reasons for striking a club off the register are:

"That persons who are not members are habitually admitted to the club merely for the purpose of obtaining intoxicating liquor.

"That the club occupies premises in respect of which within twelve months preceding the formation of the club a license has been forfeited or the renewal of a license has been refused.

"That the supply of intoxicating liquor is not under the control of the members or the committee appointed by the members.

"That persons are habitually admitted as members without an interval of at least forty-eight hours between their nomination and admission."—*Commercial Tribune.*

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**Suicide of Doctors.**

The *Chicago Tribune's* suicide record for last year shows that 8,231 Americans took their lives. The number who killed themselves in 1901 was 7,245, in 1900, 6,755, and in 1899, 5,340. The increase of 2,891 cases of self-destruction over the record for 1899 may properly excite grave apprehension. The causes alleged for last year's suicides were: Despondency, 3,150; unknown, 2,756; insanity, 309; ill-health, 433; domestic unhappiness 865; liquor, 136; disappointed love, 375; business losses, 67.

A feature of these suicides which cannot be deemed unusual, for it is corroborated by other statistics, but which possesses significance, was the large percentage of physicians among those slain by their own hands. In the list of prominent persons who killed themselves there are thirty-six doctors—nearly 5 per cent. of the total. Mulhall's figures for Europe show an equally high percentage. In a suicide record of 222 per 1,000,000 of population the number of doctors killing themselves was 472.

Why should the rate be so high? Is the doctor more quickly disillusionized about life from his more intimate study of man than the ordinary member of society? To begin one's career over a cadaver in a dissecting-room, and to spend one's lifetime studying forms of disease—does that induce a desire to shuffle off the mortal coil?

Regarding the great increase of suicide in all ranks of society, these words of Skelton may be quoted:

"It is a disheartening thing to have to acknowledge that after the wonderful progress of mankind during the last fifty or sixty years the individual practically finds life less enjoyable and more difficult than before."—*New York World.*

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## WELL WORTHY OF YOUR ATTENTION.

At this season of the year the interest of the medical profession in the treatment of inflammations of the respiratory organs is evidenced by the large amount of space devoted to this subject by the medical journals. It would seem that such an exceedingly commonplace subject as the ordinary cold, worn almost threadbare by centuries of discussion, would offer little attraction to the modern physician; yet it is a theme that receives constantly the attention of many of the leaders in medicine. The reason for this can be found in two well-recognized facts. First, that an improperly treated acute inflammation of the respiratory organs is often the precursor of grave pathologic conditions that influence other parts of the body, and are difficult, if not impossible, to permanently overcome; an instance of this is the condition of emphysema that often results from a chronic cough, which, in turn, leads to dilatation of the heart with its concomitant changes in the heart muscles. Second, the treatment of acute inflammations of the respiratory tract by the ordinarily employed methods is usually unsatisfactory. That expectorants and cough sedatives are of but little utility is the consensus of opinion of the best men; that they may in a certain limited class of cases be of some value is recognized, but it is also conceded that in the great majority of cases their effects are comparable to that of water on a duck's back. The same may be said of the much-employed cough sedatives of which opium, morphine, or one of its derivatives are the most conspicuous examples. It is true that this latter group of agents have a tendency to reduce the frequency and severity of cough, but the principal effects of opium and its derivatives consist of deleterious influences on other physiologic functions; so true is this that the most discriminating of clinicians reserve opium for scattered isolated cases. If a physician would call to the mind the pathologic conditions present in respiratory inflammations it would give a clue as to the best method of treatment that would be consistent with the laws of nature. For instance, in acute bronchitis—by far the most common respiratory affection—the mucous membrane is congested, swollen, and because of disturbance of physiologic function, covered with the products of disordered secretion, *i.e.*, mucus or the products of its decomposition or chemical change. These disordered products act just as a foreign body in any other part of the body acts. It produces irritation which manifests itself as cough, and the usual well-known sensations. What more appropriate agent could be applied to this condition of congestion, irritation, hyperesthesia and abrogation of function than a remedy that is

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sedative, demulcent and lubricant? *A priori*, petroleum would seem to be the ideal agent, and Angier's Petroleum Emulsion the form to administer it in—a pure, palatable and most efficacious form. Aside from the above mentioned theoretical reasons for the use of petroleum in acute respiratory inflammation, there exists the incontrovertible clinical fact that it has for many years yielded better and quicker results in these cases than any other remedy or combination of drugs known. It is, first of all, harmless and entirely free from detrimental influences upon any function or organ of the body. Expectorants, cough syrups and sedatives have a predilection for irritating the gastric mucous membrane and thereby inducing nausea, oft-times vomiting and almost always disturbances of digestion. In contrast to this, petroleum has a positive sedative influence on the gastro-intestinal tract. If there were no other recommendations for the use of petroleum in respiratory inflammations, the immediate effects of the remedy in affording relief from the bronchial distress, hacking cough and difficult expectoration, would entitle it to universal use as a palliative. But it is more than this; there are very few cases of acute inflammation of the bronchi, larynx and pharynx that will not be completely eradicated within a week or so after the admintration of the remedy has been started. Patients always comment upon the comfortable feeling of the throat and chest after they begin to take petroleum; this means simply that the rawness and soreness due to the congested irritable condition of the mucous membrane have been overcome by the well-attested sedative, demulcent and lubricant properties of the petroleum.

Few, if any, acute cases will become chronic if petroleum is employed as soon as the first symptoms appear; but chronic cases form a large part of the physician's winter work and are usually intractable and distressing. In chronic bronchitis of the various clinical forms, and particularly in that class designated "winter cough," petroleum has achieved an enviable reputation. Because of its above-mentioned local effects it is of specific value in overcoming the morbid secretory disturbances of the bronchial mucous membrane, which constitutes the essential feature of these chronic cases. That it has this effect is proved by the diminution in the frequency and severity of the cough, the alteration of the expectorated material from a thick viscid, tenacious mass to a fluid easily expelled, less copious mucoid material, and the freedom afforded the patient from the subjective symptoms of irritation in the thorax. In elderly people with chronic winter cough of yearly recurrence and of obstinate character, the use of strychnine in combination with petroleum yields results far

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better than any other method of treatment. Probably not a small element of the success of petroleum in chronic respiratory inflammations is due to the positive effects of the remedy as a nutritive; it will be recalled that many of these obstinate cases are associated with or even dependent upon constitutional conditions of malnutrition or general debility. As a nutritive, petroleum is, authorities of the highest class have proved, far superior to cod liver oil. This fact has been demonstrated beyond a question of doubt, and is accepted as one of the established facts of therapeutics.

In view of what the many years experiences of carefully observant physicians have proved, it may be safely stated that the treatment of both acute and chronic bronchitis, and other inflammations of the respiratory tract, will be uniformly satisfactory if petroleum is administered as soon as the condition begins and continued until convalescence is firmly established.

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W. B. Saunders & Company desire to announce to the profession that they have established a branch of their business in New York. For this purpose they have secured a suite of rooms in the Fuller Building, centrally located and easily accessible from all parts of the city. Dr. Reed B. Granger, for many years managing editor of the *New York Medical Journal*, will be connected with this new branch, and Mr. W. B. Saunders personally will divide his time between New York and Philadelphia.

The Fuller Building, erected on the triangular plot bounded by Broadway, Fifth Avenue, Twenty-Second and Twenty-Third Streets, is one of the oddest structures in the world, and because of its peculiar shape is known as the "Flatiron Building." From the offices, purposely located on the seventeenth floor, can be obtained an unobstructed panoramic view of the city.

Physicians visiting New York are cordially invited to make these conveniently-appointed offices their headquarters, where they can receive and answer their correspondence, obtain an interesting panoramic view of the city from a most favorable point, and where they will always be courteously welcomed.

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SANMETTO IN ENLARGED PROSTATE COMPLICATED WITH CYSTITIS.—Dr. J. M. Minick, of Wichita, Kans., President of the Kansas State Board of Health, reporting his experience with Sanmetto, says: "I do not explain the action of Sanmetto from any ulterior motive or for publication any further than I candidly believe it is a godsend to men who are afflicted with enlarged prostate gland complicated with chronic cystitis, with a constant desire to micturate, especially at night."

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, MARCH, 1903. NO. 3

## Original Communications.

### TIC DOULOUREUX (TRIGEMINAL NEURALGIA). REMOVAL OF THE GASSERIAN GANGLION. RECOVERY.*

BY HERBERT A. BRUCE, M.D., F.R.C.S., ENG.

Associate Professor of Clinical Surgery, University of Toronto; Surgeon St. Michael's Hospital; Surgeon Out-door Department, Toronto General Hospital.

Mr. M. C., Cayuga, aged 63, consulted me in January last (1902), when he gave the following history:—

About two years ago the trouble commenced in his lower lip, on the right side, as a sort of itching, followed by darting pains. This was accompanied by numbness. There was soreness of the right side of his mouth, gums, teeth, and of the right side of his tongue. After about a year the pain spread upwards and downwards, until the whole side of his face, above and around the eye and ear and down under the jaw bone, was affected. The pain was present almost constantly. He had taken a great deal of medicine from a number of doctors, without getting relief. I diagnosed the trouble as tic douloureux, and told him that as he had no doubt been given all the remedies that were generally used for this trouble, I did not look for any benefit from further medication, but would give him a prescription which he might try for a month or so, and if he did not obtain relief, I would advise a neurectomy of the superior maxillary nerve. I accordingly gave him strychnia, 1/20 gr. three times a day, and he used this for about a month without relief.

He then decided to have an operation performed, and returned about the middle of March. As the pain seemed to be chiefly confined to the distribution of the superior maxillary nerve, I decided to perform Carnochan's operation, *i.e.*, to remove the superior maxillary nerve, together with Meckel's ganglion by

* Read, and patient presented, before Ontario Medical Association in June, 1902.



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the antral route. This I did at St. Michael's Hospital on March 21st, assisted by Dr. Oldright.

The anterior wall of the antrum was laid bare, through a Y-shaped incision, and the infra-orbital nerve, as it emerges from the foramen, was isolated, and a silk ligature placed around it to act as a guide, and the nerve divided beyond this. A square hole, measuring three-quarters of an inch in each direction, was cut out of the front wall of the antrum with a chisel. This was so planned that the foramen was situated slightly above the centre of the hole. An electric head lamp was used to throw light into the antrum, and a smaller hole, similarly shaped, was cut in the posterior wall of the antrum. Then, with a director, the floor of the infra-orbital canal was broken through, so that the nerve was set free, and could be traced back into the spheno-maxillary fossa. There was a good deal of hemorrhage from the spheno-maxillary fossa, which was controlled by sponge pressure.

As soon as it had ceased the nerve was divided with a long pair of scissors, close to the foramen rotundum. The portion removed measured a little over an inch and three-quarters. The skin wound was closed without drainage. The supra-orbital nerve was now exposed by a transverse incision, and as much of it removed as possible. These wounds healed by first intention, and the patient was able to leave the hospital in two weeks time, having considerable relief from his pain.

After being home for a couple of weeks he wrote me that the pain had returned again, although not quite so severe as formerly. I told him that he had better wait for two or three months, and if, at the end of that time, the pain was not considerably relieved, I would remove the Gasserian ganglion. At the end of another week, however, as he was still suffering considerable pain, he decided to return and have the further operation done.

Then, at St. Michael's Hospital, on the 2nd of May, I started in to remove the Gasserian ganglion by the Hartley-Krause method, assisted by Drs. Nevitt and McCollum. Dr. Crawford gave chloroform.

An omega-shaped incision was made in the temporal region, with its base at the zygoma. The squamous portion of the temporal bone was trephined with a one-inch trephine half an inch above the zygoma, and a square portion of bone mapped out with saw cuts. The upper horizontal saw cut was placed about three inches above the zygoma. This was joined by a vertical one extending in front of the ear, and anteriorly by another saw cut half an inch behind the external angular process of the frontal bone.

After the disc of bone was removed with the trephine, the

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bone between the trephine opening and the saw cuts was removed with bone forceps, and the dura mater exposed. This was very adherent to most of the bone, and it was with some difficulty that it was separated. Then the dura mater was separated from the floor of the middle fossa as far as the foramen ovale and rotundum. There was a great deal of hemorrhage accompanying this separation.

At this stage of the operation the patient stopped breathing and his pulse became very weak, so that we had to do artificial respiration for a few minutes, when his breathing returned, and his pulse improved. We decided, however, that as he had suffered a considerable amount of shock, it would be unwise to continue, and we would divide the operation into two stages. Gauze was therefore packed in between the dura mater and the floor of the middle fossa, and the skin incision closed, allowing the packing to come out at lower angle of the incision, in front. The operation took fifty-five minutes. There was no hemorrhage from the middle meningeal artery, and it was not tied.

For the first twenty-four hours after the operation the patient was wildly delirious, and we had great difficulty in keeping him in bed. During the second twenty-four, although he was still delirious, he was more manageable, and at the end of sixty hours he became conscious and partly rational. At the end of five days he was quite himself again. On the second day after the operation, as there had been a considerable amount of oozing, the dressing was changed, and while doing it a smart hemorrhage occurred. I tried to catch the bleeding point with artery forceps, but was not successful, and I therefore packed in a quantity of iodoform gauze. This had the desired effect, and the bleeding ceased.

Eleven days after the first operation, on the 12th of May, he was given ether, and the second stage of the operation was performed. Owing to the former experience, which we thought attributable to chloroform, we decided to give him ether, and this was administered by Dr. McMahon—and I may here state that he took the anesthetic nicely, and his pulse remained good throughout, and I regretted that ether had not been used on the first occasion. Drs. McCollum and Nevitt again assisted me.

The sutures were removed and the flap turned down, and the gauze packing taken out. The dura mater was covered over with lymph. A retractor was placed beneath the temporo-sphenoidal lobe, and it was lifted up from the floor of the middle fossa, and by means of a reflector and a head lamp a good view of the deep wound could be had. The foramen rotundum was found, and the superior maxillary nerve was surrounded by a blunt hook and a ligature passed around it, and the nerve was cut beyond the ligature, close to the foramen.

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The foramen ovale was then sought for and a hook passed around the inferior maxillary nerve. It was then secured by a narrow pair of pressure forceps and the nerve cut as it entered the foramen ovale.

These nerves were traced back to the Gasserian ganglion, and the dura mater over it being divided, it was exposed lying in the cavum Mecklei, at the apex of the petrous portion of the temporal bone. The nerve trunk behind it was divided with scissors, and the ganglion lifted out, together with portions of the superior and inferior maxillary nerves, between the ganglion and their respective foramina. The ends of the nerves were pushed into the foramina with a probe. Some iodoform gauze was placed on the floor of the fossa and the wound was closed with s.w.g. sutures. The operation lasted forty minutes. The gauze was left undisturbed for a week, when it was removed. At the second stage of the operation, also, there was no trouble with the middle meningeal, and I did not require to tie it.

The margins of the right eyelid were drawn together by a couple of interrupted sutures, and were left in this condition for four days. Then the sutures were removed, and the eye was flushed out with boracic acid and a Buller's shield put on to protect it. The eye was flushed out with boracic solution and the shield kept on for ten days. The wound in the temporal region healed by first intention, and the eye looks quite healthy. The lower lid droops a little, probably owing to injury of some filaments of the facial nerve during the peripheral operation. The patient has been free from his old pain since, and although there is some numbness around the mouth, this is not troublesome. I think we can look upon this as a complete cure. It is to-day twenty-five days since the operation, and the patient has been going about for a week.

Dr. Scott, of the Biological Department, Toronto University, was present at the operation, and I gave him the ganglion and portions of the nerves for microscopic examination immediately after they were removed, and I will read the report which he has given me :—

BIOLOGICAL DEPARTMENT,
UNIVERSITY OF TORONTO,
June 4th, 1902.

DEAR DR. BRUCE,—

I have examined the Gasserian ganglion which you submitted to me at the operation on May 2, 1902, and beg to report as follows :—

The ganglion, immediately after removal, was fixed in a saturated solution of corrosive sublimate for twenty-four hours, dehydrated and imbedded in paraffin. As your report shows,

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there had been a neurectomy of the superior maxillary division of the fifth nerve, about six weeks previous to the removal of the ganglion.

The chief changes found in the ganglion are the "ascending degeneration changes" found in cells of a ganglion after division of a sensory nerve. On division of a nerve there is a peripheral or Wallerian degeneration of nerve fibres, but there are also ascending degenerative changes. This degeneration affects chiefly the cells of origin of the fibres of the nerve. It has been found that while the cells of origin of a motor nerve suffer changes, they ultimately recover, but the cells of origin of a sensory nerve ultimately degenerate. This has been observed by all who have experimented on animals—Nissl, Tugare, Van Gehuchten, Fleming.

In this Gasserian ganglion there are very few cells remaining, but instead, the capsular cells are greatly increased. The ganglion cells present have a somewhat swollen appearance, and in only a very few can a distinct nucleus be observed. There is, in the cytoplasm, very little of the chromatophile substance (Nissl granules) which is so characteristic of normal nerve cells.

Beyond these changes the only one observed was an increase of thickness in the walls of the blood vessels. Owing to lack of time, the nerves themselves have not yet been examined.

Yours truly,

(Signed) F. H. Scott, Ph.D.,
*Demonstrator in Physiology.*

Dr. Keen strongly advises the performance of a peripheral neurectomy before removal of the Gasserian ganglion, on account of the mortality of the latter operation, even though the former only gives a temporary relief. He has even performed a second peripheral operation after a few years, and found that the nerve had been reproduced. Sensation is not always lost after resection of a branch of the fifth nerve. Many investigators believe that the facial nerve contains sensory fibres. It is curious that the right tri-facial nerve is more commonly attacked than the left. In 135 cases collected by Dr. Spiller, the affected side is given in 72. In 58 the right nerve was diseased, and in 14 the left.

Dr. Cushing states that in all true cases of tic douloureux, in which all three divisions of the trigeminal nerve are affected, surgical measures alone can with any degree of certainty be depended on to afford relief, and that the removal of the Gasserian ganglion must ultimately be contemplated, and he regrets that this is looked upon as so hazardous as to be generally not recommended.

He thinks that two factors may be held responsible for the

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ill-repute in which the ganglion operation at present stands. In the first place the considerable attendant mortality, ordinarily placed at 20 per cent., and secondly, the impression which is prevalent regarding the recurrence of the neuralgia, an impression which has been occasioned by the reports of cases in which incomplete operations have been performed with a subsequent return of pain.

One of the great difficulties of the operation is the severity of the hemorrhage, which obscures the field of operation. The objective point of the operation is necessarily located at the bottom of a close-walled operative well whose depth varies from 5 to 8 centimetres, and blood staining, even in slight amount, will obscure the ganglion, and be incompatible with its complete removal.

On account of the troublesome hemorrhage, Dr. Cushing proposes a new method of removing the ganglion, which differs in detail only from the Hartley-Krause method. The trephine opening through the temporary fossa is made so low that the manipulations may be conducted underneath the middle meningeal vessel.

As far as medical treatment is concerned, the greatest amount of success seems to have been obtained by the administration of strychnia in heroic doses, as suggested by Dr. Dana, of New York. Keen also reports the recovery of a few cases after the administration of large doses of strychnia. He gives 1/20 gr. three times a day, and gradually increases this until the patient is taking 7/20 gr. in a day, and this treatment is kept up for a month or even longer.

As to the pathogenesis of tic douloureux, Dr. Dana looks upon it as a degenerative neuralgia, occurring at, or after the middle period of life, and due to a degenerative change, amounting to a neuritis, in the nerve and its ganglion, and probably in the blood vessels which supply it.

Dr. Lewellys F. Barker, after the study of a number of cases, says:—

1. If a ganglion be entirely removed, there need be no fear of return of pain from irritation of the stump of the trigeminal nerve, left behind, for all the axones of this stump will degenerate to their terminations in the pons and medulla, down as far as the cervical cord. The end of a nerve in an amputation stump is not analagous.

2. Complete removal of the Gasserian ganglion utterly abolishes the possibility of calling forth sensations in consciousness by applying stimuli to the domain of peripheral distribution of the nerves connected with the ganglion of the corresponding side.

3. If pain persists after the complete removal of the ganglion, a lesion of the central neurons of the trigeminal afferent path is indicated.

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# PREMONITORY SYMPTOMS OF FAILURE OF THE HEART IN DIPHTHERIA.*

By DR. FREDERICK FENTON, Toronto.

It has been my fortune, or misfortune, to have seen a number of deaths from the condition called "heart failure" during or following attacks of diphtheria. In, I think, every case there occurred, at longer or shorter periods before death, a group of symptoms which may admit of an anatomical explanation, and which appear to me to bear a definite relation to the cardiac condition, the whole forming a pathological and clinical entity.

It is quite possible that I am about to describe a group of symptoms familiar to you all; if so, I can still take consolation from the fact that the literature on the subject is, with the exception of one or two instances, so far as I have been able to find, very indefinite and unsatisfactory.

This complication usually arises during the second or third week of the disease, but may be met with much earlier or be delayed for a month or more.

Some patients, it is said, die suddenly and without warning, usually during some exertion or excitement, but in the majority of cases, if not in all, there are premonitions which may precede the fatal issue for times varying from hours, to days or even weeks.

Most authors in recording the subjective and objective signs do not associate them in such a way as to present a symptom complex, but rather as isolated facts, without indicating their relation to or dependence upon one another.

The first indication of the approaching trouble is, almost invariably, *abdominal pain*, usually in the epigastric region, but occasionally first referred to the region of the umbilicus.

The pain is of moderate severity, though usually sufficient to make a child cry out. At times it may be so slight as to pass almost unnoticed, while in some cases it is very intense, requiring good doses of morphia for its relief.

In one case, in a child of 14 years, the pain extended to the precordia and radiated to the left shoulder and arm, as in angina pectoris.

Though generally pale and depressed during the attack of pain, the child may appear quite itself in the intervals.

Occurring with the pain, or more frequently beginning a few hours after its incidence and continuing at intervals till death, there is vomiting.

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* Read at meeting of Toronto Clinical Society.

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The pulse is always disturbed during the attack of pain. It may be either increased or decreased in frequency, more frequently the latter, and it is always very much weakened. During the intervals between the pains the weakened pulse may be the only indication of trouble, though even this may improve if attacks of pain are not severe or close together. If vomiting has occurred the pulse remains weak. The weakness of the heart is in striking contrast to the preservation of muscular strength of the body generally. In a recent case, though for nearly twelve hours before death no pulse could be felt at the wrist, the child almost up to the end would at times raise up in bed in spite of the attendant, in her efforts to breathe more easily. The mind almost always remains clear to the end.

The points to which I wish particularly to direct attention to, and elicit discussion on, are the epigastric pain and the vomiting.

On more than one occasion I have found it difficult to get the friends to believe that the danger was as great as I represented, where a convalescent patient had what they called "colic," and whom I found, perhaps quite bright and content but with a weaker pulse of increased or decreased rapidity and perhaps a slight tendency to vomit. So much have I been impressed with the association of these symptoms that I have come to regard the occurrence of abdominal pain in diphtheria as an almost hopeless sign, even before the occurrence of vomiting and cardiac disturbance.

In three instances there was pain in the stomach before convalescence was established, but with little other disturbance. In two of these the pain recurred during convalescence, but before the patients were out of bed, this time having the other symptoms as already detailed. One of these proved fatal in two days, the other recovered after a tedious convalescence of three months duration, weakness of the heart being very marked and at times alarming. In the third case there was no recurrence of pain but the heart remained weak for several weeks, during which time the boy was confined to bed. These two recoveries are the only cases which terminated favorably out of eight having the symptoms I have referred to.

In one case a poorly nourished child, of about three years, had epigastric pain about the end of the first week of the disease but nothing was apprehended from it. Owing to general weakness it was kept in bed for a much longer time than usual, and was under observation in the hospital for some time further. Within a week after going home it dropped dead while running to the window to see the fire-reels passing on the street. As I have already said the literature on the subject is unsatisfactory. E. W. Goodall, *Encyclopedia Medica*, in

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connection with cardiac complications in diphtheria, says: "The most common is dilatation, which leads to irregularity and attacks of syncope. When acute, the dilatation is accompanied by vomiting and severe epigastric pain." Goodall and Holt are the only authors I can find who mention the group of symptoms as such. Goodall describes the pain and vomiting as accompanying rather than preceding as well as accompanying the heart failure.

Holt says: "When prodromal symptoms are present, and particularly when it is accompanied by vomiting, abdominal pain and disturbed respiration, it is probably the result of a toxic neuritis affecting either the pneumogastric or cardiac nerves, and is to be regarded as a form of post-diphtheritic paralysis."

Osler says nothing of pain. "In some instances vomiting has preceded the serious heart attack," being his only reference to the condition I speak of.

Frederick Taylor and Burney Yoe do not mention either vomiting or pain in this connection.

Goodhart mentions vomiting but not pain.

Fagge and Flint incidentally mention vomiting but make no reference to abdominal pain. Allbutt says nothing of premonitions in speaking of "heart failure," but under the heading "Vomiting" he says: "Another serious symptom, and one often associated with cardiac failure, is a tendency to vomit. The cause of it is not always the same. But whatever it be, repeated vomiting is a dangerous symptom; most of such patients die in a state of heart failure and algidity within a few hours or a few days." No reference is made to pain at all.

So far as pathology is concerned, I have nothing to say other than that it would appear that the condition is due to some involvement of the vagus, the distribution of that nerve being such that each symptom might be explained on the theory of changes affecting its fibres. Occurring as it does about the time that neuritis appears elsewhere, the assumption might fairly be made that a toxic inflammation of the vagus is the condition present.

Before closing, let me again emphasize the points I wish to make, viz.: The occurrence of abdominal pain in a case of diphtheria should be regarded with apprehension, and if associated with vomiting be looked upon as the forerunner of death.

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# MASTOIDITIS DUE TO GONOCOCCUS.*

By DR. CHARLES TROW, Toronto,
Professor of Aural Surgery, Trinity Medical College; Aurist to Toronto General Hospital and Hospital for Sick Children.

Robert W., aged 22, a farmer's son, was admitted to Toronto General Hospital under my care on January 6th last, suffering from a somewhat diffuse swelling over and about the mastoid process with moderate degree of pain.

*Personal History.*—Patient is a poorly built man, anemic, and not at all vigorous. Although he has never been really well he has had no definite illness excepting a chronic diarrhea off and on for 10 years, which 5 years ago was diagnosed tubercular. He says he has never had scarlet fever, typhoid, rheumatism or chorea. Has slight attacks of la grippe each winter. He denies absolutely ever having had gonorrhea or other venereal trouble, also says that none of his friends have been so afflicted.

*History of his present illness.*—Patient got wet through one day last November and was severely chilled. Next day he had considerable pain in both shoulders and neck. A small lump appeared in submaxillary region near greater cornu of the hyoid bone and at same time he experienced a sore throat. This condition prevailed for a week or two, to be succeeded by a sharp pain in the right ear. The patient referred it to the "drum." Some six weeks later, that is about one month before admission, he noticed a slight swelling behind his right ear, and about the same time a creamy yellow discharge from right ear and right nostril. The former continued until operation, and the latter for about two weeks after. Accompanying the swelling behind the ear was a moderately severe pain which seemed to shoot up over the vertex. This persisted until the application of ice on admission to the hospital. Temperature before operation was generally about normal, occasionally it went to 100°. Pulse varied from normal to 108.

*Examination of affected parts.*—A diffuse swelling in the mastoid region was very apparent. It seemed to extend for some distance below the tip of the process into the neck. The skin over it was normal in color. Pressure showed pitting and but very little tenderness. Pain was never a marked symptom. Hearing watch 6 inches, whispering 1 foot, speaking 1 yard.

The discharge spoken of above was moderately abundant. There was no bulging of the posterior wall of the external meatus. The drum was very much congested and irregular, with a perforation about the size of a pin's head at the lower anterior

*Read at meeting of Toronto Clinical Society.

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quadrant. The swelling of the soft tissues went almost completely away under ice bag, but the mastoid was prominent but not tender to deep pressure or percussion. On January 22nd the soft tissue began to swell again and I operated next day, and found the outer wall somewhat thinned and bulging, the whole mastoid carious, and the lateral sinus bathed in pus, and an opening through the posterior inferior part of process into neck. Cleaned it all out with chisel and curette and plugged it and the ear with iodoform gauze. No discharge from the ear after operation and hearing perfect.

*Examination of discharge from ear and nose* as reported by the house surgeon in charge. Some half-dozen examinations were made with uniform results:

1. *Before operation.*—Smears showed readily by ordinary stains pus cells were abundant and within the cells, and in many cases closely clustered about the nucleus were a number of pairs of diplococci. Morphologically and in point of size these were identical with the diplococcus of gonorrhea. Further, the microorganism was decolorized in Gram's method of staining. Cultures were then made on nutrient agar-agar and on Löffler's blood serum, but no growth could be obtained. Löffler's blood serum was then smeared with blood carefully drawn with all antiseptic precautions from the ear of another well patient, and inoculations made from the discharge from ear. Incubation at 37.5° C. for 36 hours showed a growth which on staining proved to be a non-capsulated diplococcus.

[I obtained some gonorrheal pus, and compared the gonococcus there found with the form present in pus from this patient, and morphologically, in size, in situation *within* the cell and in staining peculiarities they were identical].

The discharge from the nasal cavity showed the same form. The only other diplococci I knew of are the pneumococci and the diplococcus intracellularis found in epidemic cerebro-spinal meningitis, and both these forms, unlike the gonococci, are encapsuled. There were no other forms of bacilli found in the discharge.

2. Examination of the pus taken from the mastoid during operation showed the same form.

3. Examination of nasal discharge and material from mastoid cavity to-day, March 4th, did not show gonococci. The wound is nearly healed, and the patient has a better color, feels well, and has gained in weight probably 10 or 15 pounds.

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# THREE CASES OF PYLORIC OBSTRUCTION.*

By GEORGE A. BINGHAM, M.B., Toronto;
Professor Clinical Surgery, Trinity Medical College.

Case I.—F. P., aged 39. Family history negative. Patient states that for two years he has had repeated attacks of biliary colic, accompanied by jaundice. Has been free from these attacks during the last four months, but suffers from constant epigastric pain. He is steadily losing flesh, and suffers from what he believes to be dyspepsia, vomiting being of daily occurrence. The ejection of the food occurs about half an hour after meals and is unaccompanied by nausea. The vomited material consists of partially digested food and mucous unstained by blood. On examination some thickening is found about the pylorus, and the mass is quite tender to the touch. As medical means have been exhausted with no result, the patient demands operation.

A test breakfast shows the presence of hydrochloric acid.

*Diagnosis*—uncertain.

*Operation.*—The abdomen was opened above the umbilicus in the usual way, and the anatomical landmarks within were found to be entirely obliterated by adhesions. The gall-bladder was at first not to be found, but by patiently breaking down adhesions, the gall-bladder was finally found to be the centre of the mass, which consisted of the pylorus, duodenum, transverse colon, the liver, and some coils of jejunum, all firmly adherent to one another. The duodenum was drawn firmly downward against the greater curvatures of the stomach in such a manner as to kink the pylorus and produce a valve-like closure of that opening. The stomach was enlarged but the pylorus was not contracted; nor was there any evidence of gastric ulcer. The walls of the gall-bladder and bile ducts were thickened and the adhesions were found to be most firm at this point. The condition appeared to have been primarily one of cholecystitis and cholangitis, this followed by perigastritis with adhesions.

The patient made an uninterrupted recovery, gained rapidly in weight, and is now quite well two years after operation.

Case II.—Miss M., aged 25. Family history negative.

Previous illness.—Necrosis of tibia near knee joint, about 15 years ago.

Present illness began February, 1902, with symptoms of anemia and necrosis of one of the bones of the foot. The sinus was curetted and iron preparations given for the anemia, with slight improvement for a time. In April the action of her heart became very rapid on the slightest exertion, so she was kept in bed for six weeks, improving very slowly under iron

*Read at meeting of Toronto Clinical Society.

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and digitalis. From this time till the end of August there was very little difference in her condition, never any rise in temperature; pulse from 80 to 100 and often irregular; some shortness of breath almost every day. She never complained of any pain in the stomach, but if she ate more than a little food at a time it caused a heavy feeling in the stomach, and nearly always caused vomiting. During September and October this became gradually worse, so that she was unable to take anything but a little milk or a raw egg. Though she often felt hungry, whenever she took solid food it caused vomiting. About the 20th of October she began to complain of pain in the stomach. There had always been considerable tenderness on pressure. The pain became steadily worse, extending over nearly the whole of the right side of the abdomen. The vomiting also grew worse until it was impossible for her to take any nourishment, even the smallest amount being vomited at once; at no time was any blood vomited. She left for the hospital November 12th. On examination (November 15th) the patient is seen to be emaciated, feeble and anemic. She cannot walk without assistance—ill-defined tenderness over right abdomen, with its maximum in the neighborhood of the pylorus. Gastric feeding was impossible, as absolutely nothing was retained. Examination of the stomach contents showed free hydrochloric acid. In consultation with Dr. Fotheringham, a diagnosis of pyloric obstruction from perigastritis with adhesions was made. On opening the abdomen, November 24th, the adhesions were found binding the duodenum down to the pyloric end of the stomach, entirely closing the pylorus. After the parts were freed, an indurated mass was felt in the posterior wall of the stomach, one inch from the pylorus, evidently corresponding to the site of gastric ulcer, which had healed. The pylorus was not contracted, and though the stomach was somewhat dilated, a favorable prognosis was looked for. The convalescence was uneventful, the patient never vomiting after recovering from the anesthetic. She was discharged December 6th, and now enjoys excellent health Weight on leaving hospital December 6th, 107 pounds; weight on January 28th, 1903, 157 pounds.

CASE III.—M. G., aged 64, has complained of the usual symptoms of dyspepsia and pyloric obstruction for about four months. Reports having vomited blood only once, viz., on the day before admittance to hospital. Is at present much emaciated and apparently in a starving condition. An ill-defined tender mass is found in region of the pylorus. Free hydrochloric acid reported after examination of test breakfast.

*Diagnosis*—Pyloric obstruction, probably malignant. Operation was made and an irregular mass as large as a hen's egg was found obstructing the pylorus, with involvement of the

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glands in the vicinity. There was marked dilatation of the stomach. Pylorectomy was practically impossible owing to the extent of the lesion, therefore anterior gastro-enterostomy was done, the opening being made quite close to the greater curvature, to prevent intra-gastric pouching, as suggested by Mayo. The site of the operation was enveloped in a fold of the gastro-colic omentum, which was stitched over it. On the third day liquids were given by the mouth and the bowels moved naturally. Everything remained quite satisfactory until the sixth day, when patient developed lobar pneumonia and died.

(There is still a fourth class of cases of pyloric obstruction, where the lesion is due to gastroptosis, the weight of the prolapsed organ obliterating the pyloric outlet. In the surgical treatment of this class I have had no experience.)

I have selected these notes of these three cases from my case book because they illustrate the two great classes of pyloric obstruction, viz.: benign and malignant.

In cases I and II the cause of the obstruction is peritoneal adhesions outside the organ, the cause of these adhesions being, in Case I, a cholecystitis; in Case II, a gastric ulcer. My second object is to elicit discussion as to the best operation in a given case.

In malignant obstruction the choice lies between pylorectomy and gastro-enterostomy. The former is the ideal operation and should always be preferred when possible, taking into account the extent of the lesion and the general condition of the patient. Unfortunately, these cases are not referred to the surgeon in the early stages, as a rule, and we must therefore content ourselves with the palliative measure of gastro-enterostomy. In cases of benign obstruction, the following questions must determine the operation:

(1) Is the pyloric orifice contracted or uncontracted?

(2) Is the stomach markedly dilated or not markedly dilated?

(3) If the organ is dilated, is the muscular wall atrophied or normal?

When the pyloric orifice is not contracted, ordinarily all that is necessary is to break down the adhesions, when the function of the organ will be normally resumed. Even in these cases, however, we sometimes find, from long-continued obstruction of the outlet by the inflammatory adhesion, that the organ is markedly dilated and its muscular wall atrophied. If such complications be present, gastro-enterostomy should certainly be done, otherwise the distress of the patient will not be relieved.

In case the pylorus is contracted and the organ otherwise fairly close to normal, pyloroplasty (Heineke-Mikuliez) is our ideal operation. But when the contraction is complicated by marked dilatation and atrophy of the walls, drainage by gastro-enterostomy is undoubtedly indicated.

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# Selected Articles.

## CONGENITAL DISLOCATION OF THE HIP-JOINT AND CLUB FOOT.

A CLINIC BY PROF. DR. ADOLF LORENZ,
Professor of Orthopedic Surgery, University of Vienna, Vienna, Austria.

GENTLEMEN:—I consider it a great honor to appear before you and I wish to thank you very much for your kind invitation. I cannot better prove my gratitude for the honor bestowed upon me than to demonstrate to you, both theoretically and practically, one of my bloodless methods. The most important of these methods, to my mind, is the treatment of congenital dislocation of the hip, a method which I have termed the functional, weight-bearing one. I will be as brief as possible in explaining its principles.

The first step of the operation is to place the head of the femur in the acetabulum. The possibility of this abduction is limited by the age of the patient. In very young children there will, of course, never be any difficulty in pulling down the head of the bone to its proper position. In older children and in adults it is no longer possible to do this. The age limit for this procedure, in cases of bilateral dislocation, is said to be the seventh or eighth year. After this age limit it is necessary, before attempting the reduction, to institute a rather lengthy preparatory treatment, consisting of extension and tenotomy. The age limit in cases of unilateral dislocation is about the tenth year. The oldest case in which reduction was performed was a patient of twenty-three.

To accomplish the reduction, all the soft parts, especially the long muscles of the thigh, must be stretched so as to overcome their resistance. The abductors offer the greater resistance. In former times I used to incise them, but I found that at one time I would cut too much and at another not enough. Besides this, I found it unwise and inexpedient to have two wound cavities communicating with each other. Therefore, I resorted to subcutaneous myorrhexis, that is, to subcutaneous severing of the muscles by overstretching them and by massaging them with the sharp edge of my hand. The anterior group of muscles come next in point of resistance. The posterior muscles offer the least resistance, and this is easily overcome by simply straightening the knee with the leg in extreme abduction. After it becomes possible by this manipulation to pull down the

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head of the femur so as to bring it opposite the acetabulum, then the preparatory steps of the treatment are completed.

Now begins the real reduction, that is, the placing the head into the acetabulum. This can be done by traction, and by bringing pressure to bear down on the trochanter. I, for my part, prefer reduction by way of forced abduction, which is kept up with a wooden pillow beneath the trochanter to act as a fulcrum, until the head can be felt to slip over the posterior border of the acetabulum. If this acetabulum were of normal shape and size all would now be accomplished, and the leg could be brought down to its normal position without any further detail. But, unfortunately, in all these cases the acetabulum is so shallow that the head would immediately slip out if the leg were brought into even an approximately normal position. In order to retain the head in its place it is necessary to put the leg in a right angle abduction. In cases of great instability of the replaced head of the femur in this position of extreme abduction, a slight over-extension is to be added. In order to still further ensure the fixation of the head in the acetabulum, it is expedient to stretch and enlarge the anterior part of the capsule by free rotary movement of the thigh.

As may be imagined, after the new position of the leg has been attained, the flexors of the kneejoint become too short and we consequently find the knee rigidly flexed. This shortness of the muscles is also overcome by careful but forced stretching of the leg, bending the knee and extending it until it is possible to have complete extension. In order to retain the desired position of the thigh and leg, I apply a plaster of Paris bandage, which I will apply in your presence so that you can see all the details better than they can be described.

In cases of unilateral dislocation, I use appliances which will permit the patient to walk as soon as the pain and uncomfortable feeling of the extreme position have disappeared. In cases of bilateral dislocation voluntary motion is practically impossible, although I have seen children walk with the aid of a cane or stick when both legs were in this extreme abduction. But the child can ride and sit astride on a little chair, pushing itself along with its feet. The child not being confined to bed all passive movements are allowed. I will further explain the various steps of the operation as I go along with our cases.

CASE I.—This little girl is only three years old and has no other trouble than this dislocation of her left hip. She is well-formed and healthy. The deformity is not very great. Watch her walk. She limps but very little. The leg is about one and a half inches shorter than the other. You see that an attempt at abduction of this leg is unsuccessful. The abduction is limited. If I do a flexion and abduction I can feel the head of

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the femur very distinctly just behind the acetabulum. The dislocation is not very great and we will not have any difficulty in effecting a reduction.

It is not necessary to begin the reduction by forcibly extending the leg because the head is not very much dislocated from the centre of the acetabulum. It will suffice to make the reduction by forced abduction. By making this forced abduction the adductor muscles are made very tense, and it will be necessary to cut or tear them subcutaneously. I have given up the cutting of these muscles and I now tear them by using my hand in place of a knife. I really tear the muscles subcutaneously. You see the ridge formed by the tense adductor muscles has now disappeared completely. The muscles have been torn subcutaneously. Now, on attempting extension of the leg in this abducted position, I find that the flexors of the knee offer considerable resistance to extension. By means of forced flexion and extension of the leg I gradually overcome the resistance of these muscles. In former times I used a screw to effect this extension. For adult cases it is advisable to use it, but in children as young as this one it is wholly superfluous.

After these preparatory measures are completed I drive the head into its normal position by forced abduction, placing a block or wooden pillow under the head of the great trochanter to act as a fulcrum. This can be done without hurting the bones. You can perhaps hear the little snap as the head slides into the acetabulum over its posterior ridge. The sound can be heard very plainly in the immediate vicinity of the patient, but perhaps not at any great distance. I will grasp the head of the femur between my fingers and redislocate and replace the bone so that you can follow the reduction to better advantage. There is no doubt that the head is now in its proper position, because the head can be felt under the femoral muscles and the front of the thigh no longer shows the hollow in Scarpa's triangle. The flexion of the knee, because of the shortened flexor muscles, is still further evidence of reduction. Now the bone is in place and all the resistance of the soft parts has been overcome and we are ready to apply the plaster of Paris bandage.

A stockinet bandage is first put on, or, as I prefer, a pair of knitted drawers. Under this I run a strip of gauze about five or six inches in width, which is allowed to protrude above and below. By pulling on the ends of this strip, passing it too and fro under the bandage, the skin under the cast can be kept clean. The strip is replaced after each cleansing by a fresh strip. The leg is held in extreme right angle abduction while the cast is being applied. As I prefer to apply a very heavy and firm cast, I put on over the stockinet bandage or the drawers a very abundant supply of cotton, and over this



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the plaster of Paris bandage. The bandage is applied in the usual manner, by beginning over the right iliac crest and passing across the abdomen, down the thigh and across the knee. After taking several long turns I pass the bandage around the leg, around the abdomen, and again longitudinally until I have made a very heavy cast which completely embraces the abdomen, thigh and the knee of the affected leg. Then after the cast is applied I cut off that portion which extends below the knee so that the leg is freely movable, and also a large portion of the cast over the abdomen. There is now left only a narrow strip over the right hip, which serves as a bridge and which, because of its thickness, is quite firm. The genitalia are not included in the cast. Our cast now envelops the thigh, the left side of the abdomen, and extends across to the right as a very narrow bridge.

Now arises the question. How long should the cast be kept in place? I would always advise that the time be rather too long than too short. The bones and soft parts should be given plenty of time to adapt themselves to the changed conditions, so that there will not be a recurrence of the dislocation when the cast is removed. The cast should remain in place for at least six months or even eight. In the meanwhile the child can walk by putting a high shoe on this foot. Walking should be encouraged, for by throwing the weight of the body on the head of the femur, which is now in its right place, the acetabulum will gradually be deepened so that the head of the femur will retain its position after you remove the cast and this extreme abducted position is corrected.

It is often believed that these patients suffer pain, but that is not the case. The pain is caused by the tension of the soft parts, and after you have overcome this tension by stretching or by tearing, then there is no more tension and hence no more pain. So that these children are quite comfortable and can enjoy life just as much now as they could before the operation, in fact more, because they have more freedom of the leg than when it was dislocated.

Now, I want to call your attention very particularly to a condition which I think is, as a rule, under-rated, and which to my mind is a very important factor in pressing the head of the femur into its proper position and keeping it there for the future. This factor which I am alluding to is shrinking of the soft parts whose points of insertion become approximated by extreme abduction. It is evident that this process of shrinking takes up considerable time, in my experience from four to six months. After this shrinkage is once established with the leg in this extreme position, this contraction will exercise sufficient force to hold the bone in its place. The X-ray

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pictures and specimens prove that under favorable conditions the progressive development of the pelvic bone will still further add to the security of the new position of the head. It seems to me that in a certain number of cases even a bony wall is formed around the head of the femur so that the acetabulum, which was originally flat and very shallow, now becomes enlarged and gives the head a suitable socket.

These considerations will justify my routine of leaving the first cast undisturbed for six months at least, sometimes even longer. Of course, I take all necessary precautions to keep the skin clean under the cast. My principal treatment in the future, after the cast has been removed, is to keep the head of the femur pressed against the acetabulum as much as possible. I do not try to correct the position of the leg in any way. I permit only so much reduction of the extreme abduction as is absolutely necessary for letting the child walk with spread legs during the day. At night the primary extreme abduction is reinstituted. I accomplish this with a cushion which is placed between the legs and fastened there. I might add that the ease with which the legs can be reduced from the slightly diminished abduction into the primary extreme abduction is a characteristic prognostic symptom. If any difficulty is met with in performing this manœuvre, it can safely be assumed that the head shows a tendency to slip out of the acetabulum and to glide under the superior anterior spine of the ilium.

CASE II.—The next child on which I will operate is already five years old and has, so far as I know, a double dislocation. I am sure that we will have some difficulty in reducing the dislocation, because it is a matter of experience with me that in all cases of bilateral dislocation reduction is rendered impossible at a much earlier age than in cases of unilateral dislocation.

The prominences of the great trochanter are visible on both sides and the head of the femur can be felt very distinctly. There is considerable shortening of the legs. The highest point of the trochanter is now four centimeters above Nelaton's line. The degree of abduction is diminished considerably. You can see the prominent line formed by the adductor muscles when the leg is abducted. The soft parts are very resistant. Although the child is only five years old, I do not believe that the reduction will be effected very rapidly.

I will begin by making a little extension of the adducted leg, and then forced rotation of the leg. Next I will attempt to overcome the contraction of all the soft parts, beginning with the adductors. The wooden pillow is placed under the trochanter and I institute forced abduction with massage of the adductor muscles until I have torn these muscles subcutaneously.

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After the resistance of the adductor muscles has been overcome, then begins the reposition. Extension is made with the thigh in extreme rectangular flexion and then by continued abduction the head is finally forced into its place. The posterior border of the acetabulum is very low, but the upper edge is a little higher and quite sharp. If the bone is slipped over this portion of the rim then you get the snap announcing the reposition.

The head is driven into the acetabulum still farther by stretching the anterior wall of the joint capsule. Now, as in the previous case, the flexors of the knee are too short, and it is impossible to extend the knee because of the contraction of these muscles. This resistance is overcome by stretching. After the reposition has once been effected it is easy to dislocate and replace the bone.

In this case we will apply a double cast, which will remain in place for at least six months. In the meantime all passive motion is allowed. She may sit or push herself on her chair, or she may creep and even stand. When the cast is removed you should not try to correct this extreme position immediately, because you might drive the head out of its socket. It is quite sufficient to diminish to a minimum the degree of abduction, so that the child can walk with its legs spread. The necessary gymnastics do not consist in pulling down the legs, but on the contrary, every effort is made to push them up. The child will continually try to get its legs down into place, and in the proper course of time it will succeed in doing so.

It is important that the movements of flexion should always be carried out in the frontal and not in the saggital plane, because the latter movements do not comply with the security of the position of the head. In cases of great looseness of the heads you can add to the security of their position by over-extension, that is, by driving both femurs behind the frontal plane. Many mistakes have been made by hurrying the correction of this position and I wish to emphasize that the gradual correction of this extreme abduction into the normal parallelism of the legs is often a matter of years. I rather like to see children retain a slight degree of abduction of the legs for some time afterward.

As to the results of the bloodless operation, I want to say this: We have to distinguish between the anatomical and functional results. The anatomical result is always a poor one if extensive deformities of the femoral head or the acetabular cavity existed before the operation. But, and this is a point of great importance, a poor anatomical result is perfectly compatible with a satisfactory functional result. Sometimes the head of the femur is not retained in the acetabulum after the bandage is removed, because of a very defective acetabulum,

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Then the head passes under the anterior superior spine of the ilium where it is furnished with a firm, bony support, without being in the acetabulum, so that the up and down movements of the thigh are prevented.

Formerly I attempted to correct such a faulty anatomical result, but I do so no more. I am now satisfied with the functional amelioration which I obtain. If the anatomical condition of the head of the femur and the acetabulum are only tolerably good, we may be sure that this method will give satisfactory results, both anatomically and functionally. I have quite a number of such cases on my records in which it is very difficult to recognize the former pathologic condition.

I want to tell you that I have used this bloodless method of reduction in nearly a thousand cases, with the most favorable results in the great majority of cases, and it affords me great pleasure to learn that the same results have been achieved by my method in all parts of the world. It is particularly gratifying to me that so many surgeons in this country have pursued this method with good results, as America is really the birthplace of orthopedic surgery. I consider it a sufficient remuneration for my efforts that a method has been developed which gives such good results in a deformity which up to a short time ago was considered incurable. And further, that this method has helped us to dispense with the bloody operation, which was always such a menace to the life of the patient.

CASE III.—This child is younger than the first and there are no difficulties at all in such a case. I will operate later on a case of nine and another of eleven, so that you can see a few cases of what I consider difficult reduction. Extension is not necessary in this case. The muscle is torn easily and the head immediately slips into its proper place. Of course you must always be careful not to break a bone. The force you use must be measured, otherwise the bone will surely break. The plaster cast is applied in the same way as before, with the leg in extreme abduction. This cast is removed in about six months and then the child is to be encouraged to walk as much as possible, so that the leg will gradually correct itself without any manipulation on your part.

I wish that I could have the pleasure of demonstrating these cases to you when the cast is finally removed, but I have had the opportunity of presenting such cases, which were cured in every respect, at the International Congresses at Rome, Moscow, Berlin and Hamburg, and many of them in my home, Vienna. I can assure that often the examining physician was unable to say which side was operated on, the result being absolutely perfect.

CASE IV.—This little girl was operated upon three years ago

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for the same purpose, but without any result. I might expect that the result would have been *nil*, because the adductor muscles were allowed to remain intact. Notice the prominent ridge which they still form at the point of their insertion. They must either be cut or torn subcutaneously if you wish to succeed in putting the head in its proper place. You can feel a deep depression or sulcus here, which shows us that the head of the femur is not in its place. I do not believe that reduction was ever perfected in this case.

We will begin the reduction by tearing these muscles. Of course, you could cut them with the knife, but you are liable to cut too much, or at another time you do not cut enough. If you tear them by force massage with the hand you have the assurance that you are doing just what is necessary. The leg is held in this position of extreme abduction and my hand is my knife. Now, you see that this prominence of the adductor muscles has disappeared entirely. The contracture of the knee has also been overcome, and we will try to get the head of the bone into place by careful manipulation. There, you could hear the snap as the head slipped into the acetabulum.

Now you can see that it is impossible to straighten the knee because the muscles on the under side of the leg are not long enough. This traction must be overcome by stretching, which is accomplished without any great effort. I am quite sure that this child will be totally cured. In this position of extreme abduction the head cannot slip out of its socket, but as soon as you attempt to adduct the leg you will find that at a certain point dislocation will again occur. In this case the head slips out when the leg is extended about half way, so that it is a matter of great necessity that the leg be kept in this extreme position if we wish to keep the head in place.

In order to favor the retention of the bone it is also necessary to stretch the anterior wall of the capsule of the joint as much as possible. This makes a deeper joint cavity. Where we at first saw the depression we now see an elevation. That is the head of the femur which now occupies its normal position, and to be certain that the head is retained in its right place it is advisable to make a little further extension so that the leg is behind the frontal axis. Now all is ready for the application of the plaster of Paris bandage.

CASE V.—The shortening of the leg in this case is considerable. The upper border of the great trochanter is on a level with the superior anterior spine of the ilium, a shortening of about four centimeters. It will be advisable to begin with extension so as to overcome the resistance of the long muscles. Now, you can see that a difficult reposition has not only its bad but also its good sides. The more difficult the reposition the

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better is the outcome of the case. The adductor muscles are cut as in the previous cases, and the head is replaced in the acetabulum, after which the flexors of the knee are stretched in the usual way. We will see how far we can reduce the abduction without causing a redislocation of the head of the bone. You can adduct completely in this case, but I would not advise you to leave the leg in that position no matter how favorable it may seem. I once had a case just like this and in order to make it easier for the child to walk I concluded that I would apply the plaster cast with the leg in complete adduction. When I removed the cast six months afterward I found the head dislocated and in its original position. Therefore I would always advise that the cast be applied with the leg in extreme abduction.

CASE VI.—This is another case of bilateral dislocation in a child of seven, but I would not touch this case, even in Vienna, because I am certain that it is impossible to effect the reduction. The heads of the femurs are too high up and it is absolutely impossible to overcome the shortening without first instituting a preparatory treatment. I would have to cut all the flexors of the knee joint, the spinal muscles, adductors and abductors and in addition carry out the extension treatment. Some months later you could perhaps try to effect a reduction, but even then the result would be questionable.

CASE VII.—The head in this case rests on the os ilium and it is quite freely movable. You can move it up and down and forward and backward. There is only a quarter of an inch of shortening and this we will reduce by forced extension. When we extend the leg the head of the bone may be opposite the acetabulum, but it is not in the acetabulum. We massage the group of adductor muscles until the prominence has disappeared. Then we reduce the dislocation, stretch the flexors of the knee and stretch also the anterior wall of the joint capsule.

This position of extreme abduction does not, as one would naturally suppose, tear the blood vessels. They are sufficiently elastic to give a little. The acetabulum here is very shallow and the head slips out very easily, but if the cast is carefully applied it makes sufficient pressure on the bone so that it will in the course of the next six months make for itself a good, deep bed. We must never lose sight of the fact that the cleanliness of the skin is a matter of supreme importance. Measures must be taken to keep the skin under the cast perfectly clean. You see I first put on this stockinet bandage, and between this and the skin I lay the piece of gauze by means of which the skin is kept as I have already indicated.

CASE VIII.—This little girl has the disadvantage of being

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nine years of age, and it will be a matter of great difficulty to effect reduction in this case. Very forcible extension and manipulation is necessary to overcome the extreme resistance of all these muscles. The method is the same as in the other cases, but it will take more time to effect reposition and our efforts will be greater. I will ask you to watch carefully the manipulation as I must give my closest attention, and cannot explain the steps of the operation as I go along. There, you could hear the head going into place. We now overcome the resistance and shortening of the flexors of the knee, stretch the anterior wall of the joint capsule and apply the plaster cast with the leg in rectangular flexion and strongly abducted. The cast will not be removed for at least eight months.

CASE IX.—This little patient is already eleven years old and is about the age limit in this work. I do not know whether I shall succeed here. The tenth year is really the age limit and she is eleven, but we will try to effect reduction. There is also considerable atrophy of all the muscles of the affected limb, showing that there are some trophic changes.

I placed the wooden pillow under the head of the trochanter to give us a greater leverage. Of course, there is some danger of breaking the neck of the femur, but that is true in every case of this kind. This is very hard work because of the firmness of all the parts and it must be done with the utmost care. We stretch the leg and then bend it backward so as to elongate the anterior muscles of the thigh. Next we flex the leg on the abdomen as far as possible so as to overcome the resistance of the muscles on the posterior aspect. Abduction is carried to the extreme point so as to loosen up all the soft parts. This requires a great deal of manipulation. Now it is in! The acetabulum in this case is so shallow as to be almost flat and a great deal of stretching of the capsule is necessary.

In this operation in such old children there is very great danger of tearing the femoral artery, which would mean an exarticulation of the hip joint. I have never been unfortunate enough to tear the artery, nor do I know of any one else having done so, but you can readily see that it is liable to happen. When I get a case so well along in years I am always afraid that this might happen.

Now we have stretched the capsule sufficiently and you can see now that all the soft parts are stretched enough to let the head of the bone move freely in all directions. You can also see the lengthening and shortening of the femur and leg when the bone is in and when it is out. I place my hand on the trochanter, and you see that when the bone falls out of the acetabulum my hand drops, and when it is replaced in the

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acetabulum, my hand rises. I think we will have a good result in this case after all, but I would advise that the cast remain in place for at least seven or eight months.

### CASE OF CLUB FOOT.

Next to the congenital dislocation of the hip joint the most prominent deformity is congenital club foot, and as we have a case of this kind here for treatment, I will avail myself of the opportunity to demonstrate my bloodless method of reducing the deformity. The treatment of this deformity in the new-born is almost uniformly a bloodless one, and a variety of appliances are used with a rather variable result. So far as children over five years of age are concerned, we find that in different countries different methods of treatment are carried out. In Germany the bloodless method is the method most in vogue, and I am very happy to state that this is at least partially due to my efforts and to my demonstrations before many German surgical meetings.

I demonstrated what I call my bloodless modelling method, but still quite a few surgeons do not seem thoroughly convinced of the efficacy of this method and resort to cutting operations, which consist mainly in wedge-shaped resections of the bone followed by the application of a plaster of Paris bandage. To me the wedge-shaped resection means an unnecessary and therefore most deplorable mutilation of the foot. For some reason most surgeons prefer to treat the deformity by a cutting operation in the later years of the infant's existence rather than to perform a bloodless operation immediately after birth. Evidently the methods hitherto used are faulty and do not correct the deformity. Therefore it seems to me necessary that the bloodless reduction must be one that thoroughly corrects the deformity in the new-born so that it will no longer be necessary to resort to cutting operations later on.

Such a method is my modelling redressment of the club foot, and it is equally applicable in the new-born and in the older child. This patient before you is already sixteen years of age and reduction is manifestly more difficult than in a child. I first overcome the resistance of the soft parts, that is, the skin, subcutaneous tissues, the tendons, fasciæ and ligaments. It is important to overcome not only the resistance of the soft parts, but such resistance must be completely annihilated. The soft parts are stretched and in this way their elasticity will be brought into play. This elasticity will, of course, counteract the correction of the deformity and as soon as we let go of the foot it will return to its faulty position because of the elasticity of the soft parts. If we should try to retain the foot in the corrected position by means of some appliance or a cast or

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splint, we will have a decubitus on those points which are most exposed to the pressure.

The principle of the remodelling redressment is to keep on with the act of correction until the elasticity of the soft parts is completely destroyed so that the foot will no longer rebound into its original position. The foot must become as pliable as a piece of cloth. In a young child one can almost tie the foot into a knot without any tendency of the foot to return to its faulty position. Then I can place the foot in any position desired and keep it there.

As to the special technique,—I want to say that it is radically wrong to try to redress the deformity altogether. In fact, you must analyze the deformity and divide it into its separate component parts, and then you overcome or correct the deformity in accordance to the regular order of its component parts. First comes the technique of the faulty abduction, then the straightening out of the extreme flexion over the instep. Then the equinus position is to be corrected and then we work against the suppination of the foot. After this gradual correction is accomplished the complete reduction of the deformity *in toto* is possible. And now comes the time to apply the cast when there is no longer any danger of inhibiting or interfering with the circulation of the blood.

It must be borne in mind, however, that because of this rather forcible treatment slight disturbances of the circulation may occur so that a swelling of the limb results. This necessitates the following precautions: Any cast applied must be fenestrated so that it is possible to keep the condition of the foot under constant control. We must make sure that the circulation in the toes is perfect before we dismiss the child with its cast. The cast is kept on its foot for several months and it is to be renewed after its removal until the foot is in a perfect valgus position, when it is no longer restrained by a dressing.

Then we start in with gymnastic exercises and massage, the object being to develop and strengthen the pronators so that the valgus position will be maintained by the normal tonicity of the muscles. By this method any club foot, even in adults, can be successfully reduced. I have never tried tendon transplantation. The cast is applied with the same precautions as in the hip joint cases.—*The Clinical Review.*

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# EMPYEMA.*

By CHARLES GILMORE KERLEY, M.D.

The author began his paper with the statement that empyema is the result of infection of the pleura with pathogenic organisms. A large majority of the cases show that pneumococcus is in the pure culture; the streptococcus and the staphylococcus, alone or in combination with the pneumococcus, are seen less frequently. Tuberculosis is rarely a cause of empyema. The disease is rarely primary, being secondary to pneumonia in fully ninety-five per cent. of cases. The symptomatology varies, depending on the nature and severity of the primary disease. He cautioned against confusing empyema with malaria, typhoid fever, unresolved pneumonia, and tuberculosis. The average case of empyema following pneumonia he described as follows:—

A child has pneumonia; it runs the usual course of fever, respiration, pulse and prostration; after a time, from six to twelve days possibly, an improvement in the symptoms is noticed; the pulse and respiration become slower and the child brighter; the temperature range for twenty-four hours is lower; during the height of the fever it was perhaps from 104 degrees to 105 degrees F.; now it ranges from 100 to 102 degrees, occasionally touching at 99 degrees. Behaving in this way for a few days, it is soon noticed that it is lower in the morning than in the evening, although the evening temperature might not be high, perhaps not over 102 degrees, occasionally reaching 103 degrees. The pulse and respiration both remain accelerated and the child coughs. These symptoms may continue for weeks if the true nature of the case is not made out.

Forty-three cases comprise the number seen by the author, in patients from the various walks of life. Some developed under his own observation, and others were first seen after a long illness. In all of the cases there were three symptoms in common, cough, fever (higher in the evening), and accelerated respiration.

Under physical signs, inspection of the chest was referred to as being valuable, in that there is a difference of mobility of the two sides; the diseased side rests, the sound side is active. An increase in the measurement of the diseased side is in itself of no diagnostic value. He cited cases in which the sound side was the larger. This is apt to be the case when there is a small amount of fluid in the pleuro-cavity, or when absorption has already begun.

* Abstract of paper read before the Clinical Society of the New York Polyclinic Medical School and Hospital, October 6th, 1902.

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Displacement of the apex beat of the heart upward and to the right is one of the most reliable signs of fluid in the left pleural cavity. Under auscultation it is claimed that fluid always produces a deviation from the normal respiratory sounds, but not always the same changes will be observed. There may be bronchial breathing and bronchial voice when the chest is full of fluid, or greatly diminished and weakened breathing and weakened voice sounds when the amount of fluid is small.

Percussion is considered one of the most valuable aids in diagnosing fluid in the pleural cavity. If there is a moderate amount of fluid, there will invariably be dulness, and if the amount is considerable, there will invariably be flatness. Serum and pus show the same physical signs. There is but one way to differentiate between serum and pus, and this is in the use of the exploring needle, which should always be used to prove the diagnosis. There is no danger in the use of a sterile needle and a properly prepared skin.

As regards treatment, in a recent case in a child under two years of age, incision under local anesthesia is all that is ordinarily required. In older children, or in a prolonged case in a young child, the removal of a portion of a rib under gas anesthesia is best. Irrigation of the pleural cavity is not necessary. The dressing should be changed once a day and the tube shortened as the lung expands.

The author concluded as follows :—

The disease in every one of the forty-three cases was secondary, and in forty it was secondary to pneumonia. Every child coughed, every one had fever, practically constant, higher in the evening, but rarely going above 103 degrees F.; every child had accelerated respiration, the chest in each case showing flatness on percussion, and marked changes from the normal in auscultation. Children in whom the disease had existed longer than a week showed marked emaciation.

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# Progress of Medical Science.

## MEDICINE.

IN CHARGE OF W. H. B. AIKINS, T. M. McMAHON, H. J. HAMILTON, AND INGERSOLL OLMSTED.

### Painful Adipositas or Dercum's Disease.

Dercum, an American physician, was the first to describe (in 1888) painful adipositas, a disease which has since that time been the subject of many treatises. G. Ballet relates a very important case. The patient was a woman, 68 years old, who could give no account of her past history on account of her mental condition. Six years ago she suffered from acute pains in the arms and lower limbs. After some time the painful parts began to swell rapidly. The swelling still continues. The arms and legs look as if covered with a muff of fat, while the hands and feet are almost normal and show only a little superficial edema. On palpating the skin, one observes globules of fat, isolated and circumscribed. Elsewhere the fat is diffused. The patient now complains of pain only when the swollen parts are pressed. She cannot make any great movement, as in walking. The heart is normal, with the exception of a systolic bruit. The lightest work tires her. Her mental faculties are decidedly impaired. She is irritable, gloomy, melancholic; cries frequently.

In this patient we miss some symptoms observed in other cases of painful adipositas: epistaxis, hematemesis, metrorrhagia, arthropathy, vaso-motor disturbances, premature senility. The diagnosis is made by exclusion. It is not a case of ordinary obesity, because the latter is not limited to certain regions of the body and is not accompanied by pain. Myxedema may be excluded, because in it the face is swollen and œdematous and the thyroid treatment banishes the cerebral symptoms. Trophic œdema may also be excluded, because it does not present the contrast in the size of the legs and feet; it does not give the feeling of softness characteristic of fatty tissue, and it is unilateral. Painful adipositas is observed generally in women and adults. Its etiology is obscure. It has been attributed to alcoholism, syphilis, traumatism. The constancy of the pain indicates a nerve disturbance, and possibly a polyneuritis. This nerve disturbance would explain the vaso-motor symptoms, the scleroderma, the arthropathies. The nerve change has been attributed to a thyroid intoxication, because Dercum found a calcification and a distension of the

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alveoli of the thyroid with a colloid substance. The results of the thyroid treatment are not however constant.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

**Aneurism of the Hepatic Artery.**

In literature are reported eight cases of aneurism of the hepatic artery. The first was published by Kaufmann in 1868, but it is incomplete clinically and anatomically. The second was by Weinlechner, and was in a young man with osteomyelitis of the femur, who died from rupture of an aneurism of the hepatic artery. The third was by Chiari. It was in a man 33 years old, who a few days before dying had profuse gastrorrhagia and enterorrhagia. Autopsy revealed aneurism of the cystic artery, which had ruptured into the gall bladder. The latter contained calculi. The fourth case, published by Caton, was in a man of 40, who had suffered for 15 months from attacks of pain in the right hypochondriac region and from jaundice. He had vomiting (without blood), and enterorrhagia. At the autopsy there was found aneurism of the hepatic artery, ruptured into the hepatic duct. The fifth case, reported by Sacks, was a man of 60, who for six years had repeated gastrorrhagia. At the autopsy there were discovered œsophageal varices and aneurism of the hepatic artery ruptured into the hepatic vein. The sixth case was by Withe, and was in a young man of 20, who after a pneumonic infection had jaundice and fecal acholia, and died after an illness of 34 days. At the autopsy there was found an aneurism of the hepatic artery, as large as a mandarin, which included the hepatic duct. The seventh case was reported by Bernard in 1897, and was in a man of 46, who had attacks of pain in the abdomen, chills, jaundice. At the autopsy there was found an aneurism of the hepatic artery, large as an orange, ruptured into the peritoneal cavity. The last case was reported also in 1897, by Hausson. It was in a man of 19, who after an acute osteomyelitis suffered frequently during convalescence from bloody vomiting, with indefinite symptoms of gastric or duodenal ulcer. He died after a severe hemorrhage. The autopsy revealed hepatic aneurism.

Of the two cases seen by Sommer in the hospital of Graz, one was in a man of 28, the other in a woman of 65. In the former there was copious enterorrhagia, which caused death from exhaustion. At the autopsy there was found aneurism of the hepatic artery, perforated into the ductus choledochus. In the second case there was a copious gastrorrhagia, followed by profound coma and death. The autopsy revealed aneurism of the gastro-duodenal artery, with perforation into the duodenum.

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The diagnosis of aneurism of the hepatic artery is somewhat difficult. According to Murchinson and Frerichs, the pathognomonic symptoms are repeated gastro-enterorrhagia, jaundice, strong colicky pains in the right hypochondriac or epigastric regions. The jaundice is intermittent and is accompanied often by attacks of pain. The chief causes of aneurism of the hepatic artery are injuries, and the acute infective diseases, as pneumonia, typhoid, osteomyelitis.—Translated from *Giornale Internazionale delle Scienze Mediche*, by HARLEY SMITH.

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## OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN AND J. O. ORR.

### On the Necessity for the Use of Color Names in a Test for Color Blindness.

F. W. Edridge-Green (*Ophthalmic Record*) says that the first requirement of a test for color blindness is that color names be used and that the person to be examined should employ and understand the use of color names, red, yellow, green and blue. I can say in the most emphatic manner that no test which ignores color names can be efficient. I predicted that if color names were ignored in the Board of Trade tests, normal sighted persons would be rejected, and this prediction was fulfilled. Over 38 per cent. one year, and 42 per cent. another year, were found to be normal sighted and to have been rejected wrongly. An engine driver or a sailor has to name a colored light when he sees it, not to match it. He has to say to himself, "this is a red light, therefore there is danger," and this is practically the same as if he had made the observation out aloud. Even the method of matching colors should, in order to be efficient, be one of mentally naming them. In my classification test I use colored materials of different kinds as similarity. . . . The color blind may be divided into two distinct classes which are independent of each other, but which may be associated. The first class includes those who are not able to see certain rays of the spectrum; their spectrum is shortened at one or both ends. If a man have a shortening of the red end of the spectrum, he will not be able to see a red light at a distance, though he might be able to pick out all the green wools in the classification test. A man of this kind, when shown the red light of my lantern test, declares that there is no light visible, at once demonstrating his incapacity. The second class of the color blind make mistakes not because they can not perceive a certain color, but because they are not able to recog-

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nize the difference between the colors which is evident to normal sighted persons. Both these classes are represented by analogous conditions in the perception of sounds. The first class of the color blind is represented by those who are unable to hear very high or very low notes, that is to say these notes are non-existent to them. The second class is represented by those who possess what is commonly called a defective musical ear. Normal sighted persons see six definite colors (points of difference) in the spectrum. The second class of the color blind see five, four, three, two or one color, according to the degree of the defect, and they confuse the colors of the normal sighted, which are included in one of their own. If the normal sighted be designated hexachromic, those who see five colors may be called pentachromic, those who see four tetrachromic, those who see three trichromic, those who see two dichromic, and the totally blind monochromic. The degree of the defect will be recognized by the names given to the different colors. The pentachromic will miscall orange. The tetrachromic will, in addition, makes mistakes with regard to blue. It is not necessary to reject either of these two varieties, because I have never succeeded in making them confuse the colors red, yellow, green and violet. The trichromic are always in difficulty over yellow and miscall it red, green or red-green, and for practical purposes must be excluded as color blind. The dichromic confuse red, orange, yellow, and yellow-green on the one hand, and blue-green, blue and violet on the other.

## A Case of Retinal Hemorrhage in a Patient of Seventy-three. Treatment by FaradicCurrent. Complete Recovery.

Hasket Derby (*Boston Medical and Surgical Journal*, January 15th, 1903), says:—

In 1898 Professor von Reuss, of Vienna, published in the *Graefe Archive* an article on the use of the Faradic current in certain affections of the eye. It was entitled, "New Experiences in the Electric-Treatment of Inflammatory Affections of the Eye." Using sometimes the hand of the operator, but more generally a small flat copper disc or conductor, held on the head by a strap and resting on a layer of wet cotton applied to the eye, he employed a comparatively feeble current daily for periods varying from ten minutes to half an hour. This form of treatment was used in cases of scleritis, iritis, iridocyclitis, consecutive vitreous opacities and intraocular hemorrhages. In many instances it appeared to do good, its analgesic action in iritis being found to be particularly frequent and satisfactory.

In closing his account of the application of the interrupted current to the treatment of intraocular hemorrhage, Von Reuss says:

"It consequently appears that fresh bleeding into the anterior

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chamber and into the vitreous is favorably influenced by the Faradic treatment, but it is well not to forget that fresh effusions of blood, for instance after operations, often spontaneously and quickly disappear. Electricity can scarcely influence hemorrhages in and under the retina."

In spite of this discouraging statement it occurred to me to try this treatment in a case of extensive retinal hemorrhage that came under my care during the past winter. It was the first case of the kind I had ever submitted to a prolonged course of treatment. For therapeutics there had seemed little place in this affection, particularly when occurring in advanced years, and betokening a probably atheromatous condition of the cerebral arteries. I had for many years advised such patients to leave the recovery to nature, and assured them that the injury might, to a certain extent, be repaired. Unless a fresh giving way of the vessels occurred, a portion of the lost vision might ultimately return. I had generally, for the sake of doing something, advised a course of iodide of potash, and warned the family physician of what was to be apprehended. After that I dismissed the case from my mind. In the comparatively infrequent event of my seeing the patient again, months or years afterwards, I had rarely found much improvement, especially when the hemorrhage involved the macular region. The eye was permanently disabled.

Mrs. Blank, aged seventy-three, had been under my observation since 1884. October 9th, 1901, she came in, complaining that there was failure of vision in the right eye, this having lasted since the previous July. On dilating the right pupil, numerous retinal hemorrhages came into view. They were scattered over the entire fundus. The largest hemorrhage was in the macular region, and was quite extensive.

The application of the Faradic current was commenced October 17th, and used, ten minutes at a time, three times a week, up to May 26th. A single absence from the city of ten days, occurring in the early spring, formed the only interruption. Small doses of iodide of potash were also administered during all this time. The peripheric hemorrhages began to absorb much more quickly than the macular, being substantially gone before the large one in this situation had shown any signs of yielding. The first improvement was, therefore, in lateral vision, but central before long followed suit. December 20th vision had risen to nearly five-tenths; January 7th to six-tenths, and on February 7th the macular region was nearly free. Slight vitreous haziness long persisted, but finally cleared up. May 26th vision was nearly seven-tenths, all the letters on the line being correctly made out, though with some effort. As this was her original vision, and nearly equalled that of



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the other eye, treatment was now suspended. My last ophthalmoscopic examination was made September 2nd, and was conducted in the country; the light available was not very good, but as far as I could see there was not a single spot of hemorrhage in the fundus, a very slight grayish discoloration alone marking the site of the more extensive blood patches. About October 15th the patient visited me at my office here, and I found vision nearly eight-tenths, slightly more acute than I had ever found it before.

This is but a single case. The recovery may have been due to other causes than the use of the current. It is possible that it might have occurred spontaneously. But it is surely an unusual instance of a *restitutio ad integrum* in a person of over seventy, of very full habit and in an aggravated case. The treatment is so simple and so easily applied that I trust other members of the profession will follow it up and report their results. J. T. D.

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## OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD, K. McILWRAITH, AND HELEN MACMURCHY.

### A New Obstetrical Instrument.

Professor Bossi, of Genoa, has invented a new obstetrical instrument which may be described as a cervical dilator, intended for use in certain obstetrical cases where rapid dilation of the cervix uteri and immediate delivery are indicated.

Among the first to use the instrument was Professor G. Leopold, director of the Obstetrical and Gynecological Institute at Dresden, who has published reports of seventeen cases, in which it was used. Twelve of these were cases of puerperal eclampsia, ten of them being multiparæ and two primiparæ. Dilatation of the os uteri was completed in from twenty to thirty minutes, and in nearly all of the cases uterine contraction began during the use of the instrument. Laceration of the cervix did not occur in any of the cases, and there was no hemorrhage. Of the twelve children seven were born alive, forceps being used; four of the others had died before or during labor. The remaining five cases reported by Leopold were: one of severe uterine spasm, one of pyrexia complicating labor, one of advanced phthisis complicating labor, and two of contracted pelvis. All these patients recovered.

Professor A. R. Simpson, of Edinburgh, exhibited the Bossi dilator to the Edinburgh Obstetrical Society in May, 1902, and

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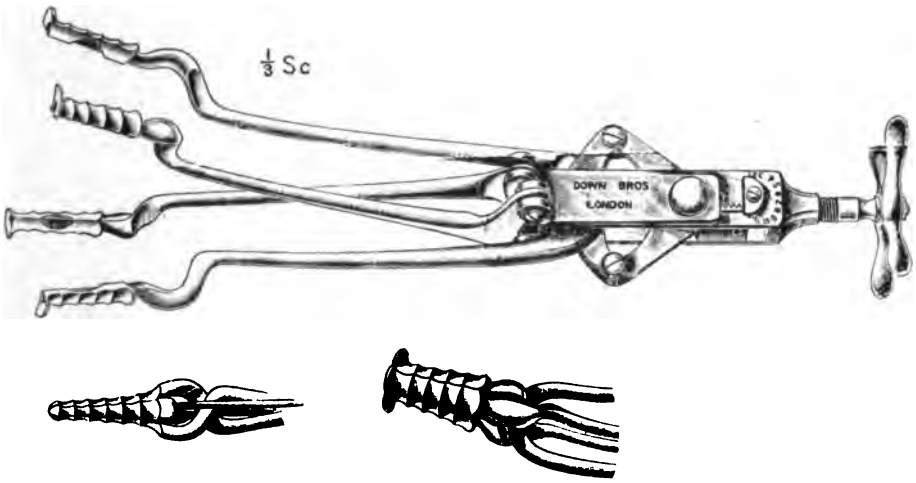
at their meeting in November, 1902, reported a case in which he had used it.

The patient was a primipara, and was admitted into the Edinburgh Royal Maternity Hospital in an unconscious condition, after having had a series of convulsions. Her feet and ankles had been swollen for several days, and she had suffered from headache. The urine, drawn off by catheter, contained twenty-eight grains of albumin to the ounce. Another convulsion occurred shortly after admission, the breathing became stertorous and pulse rapid. Chloroform was administered and Bossi's dilator was introduced at first without the sheaths, occasional douches of lysol being given. The os was fully dilated in about twenty minutes, no laceration occurring and practically no hemorrhage. The membranes ruptured before




dilation was quite complete. Axis-traction forceps were used and the labor was over in thirty-five minutes after dilatation had been completed. The child, a female, weighed six and a half pounds. During the next three days the patient had sixteen convulsions, but the albumin rapidly diminished and disappeared from the urine altogether by the ninth day.

Dr. William R. Frost also reported a case of eclampsia at the same meeting. Dr. Frost's patient was in the eighth month of her eighth pregnancy, and had had a convulsion before the medical attendant was summoned. She was in a grave condition and labor pains had not begun. Bossi's dilator was introduced without the sheaths and dilatation was accomplished up to three and a half centimetres, when the instrument was withdrawn and reintroduced with the shields *in situ*. Dilatation

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was not difficult up to eight centimetres, but resistance then became so great that the instrument was withdrawn when the index registered nine and a half centimetres, because laceration was feared if further force was used. Thirty-five minutes were occupied in dilatation, and the labor was completed by forceps in forty-five minutes more. The child was alive and the mother eventually made a good recovery. Convulsions occurred for eighteen hours after delivery and the urine was found to contain three grammes of albumin per litre, some blood and granular and blood casts, the urea being 1.2 per cent. This patient had an attack of jaundice during the puerperium. Both Dr. Wright's patient and Prof. Simpson's patient were treated with enemata of chloral and potassium bromide.

Leopold thinks that this instrument is a valuable one for use in suitable cases, and that it will often prevent the necessity for Cesarean section in cases of eclampsia.

The foregoing illustration shows the instrument as manufactured by Messrs. Down Brothers, London, England.

H. M.

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# Editorials.

## FRIGHT AND CHLOROFORM DEATHS.

An important leader in the *British Medical Journal* of February 21st last calls attention, under the above heading, to a lecture recently delivered at the New York Polyclinic, by Dr. J. A. Bodine, upon this subject. It appears that Dr. Bodine considers that most deaths which take place during the administration of chloroform, are due, not to poisoning by the drug, but to fright. He quotes an interesting case in support of this view: "The patient, a very nervous individual, became so frightened before the operation that the rhythm of his breathing was seriously disturbed; the anesthetist, in consequence of this, gave him some preliminary training in deep breathing before the administration of the chloroform; the cone was placed over his face, and he was told to breathe deeply; after a few gasps he ceased to breathe and could not be resuscitated. Not a single drop of chloroform had been administered." Dr. Bodine thinks that "if death from fright could be eliminated chloroform would be a much safer anesthetic."

His views thus coincide with those of Dr. R. D. Rudolf, of this city, who, in a pamphlet entitled "Observations on Blood Pressure," with special reference to chloroform (published in 1901, as a Toronto University study), wrote as follows: "When the blood pressure falls greatly from chloroform and remains low, life must be endangered, but in my experience animals do not die more easily from chloroform administered in the vertical than in the horizontal position, and it is decidedly harder to kill a dog with chloroform when the pressure is very low from hemorrhage than when this is not the case. . . . . If then it is harder to kill a dog by chloroform when the pressure is low than when it is not so, why should it be that all anesthetists are agreed upon the danger of giving anesthetics when the patient is sitting up? The answer I believe lies in the fact that most deaths, which occur in practice during the administration of chloroform, are *not* cases of

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poisoning from the drug, but *are due to syncope resulting either from the pain of an operation commenced too soon, or from* fear."

Dr. Rudolf quotes Sir J. Y. Simpson, Brodie, Cooper, Home, Travers, Snow and others, all of whom recognize this form of death during chloroform anesthesia, and remarks that "the distinction between deaths from chloroform and deaths simply occurring during the administration of chloroform is even more important to-day than it was in Simpson's time. Nowadays so many patients have a dread of chloroform, that one would expect cases of syncope to occur occasionally when they are going under the anesthetic and are still conscious and afraid."

With these views before us, the inadvisability of allowing any reports of accidents occurring during anesthesia to get into the lay press is evident. Such reports can do no good and may lead to deaths, by producing a dangerous state of nervous dread in those about to undergo anesthesia.

## SIR JAMES GRANT'S JUBILEE.

We desire to congratulate Sir James Grant on the recent celebration of his jubilee in the medical profession. He entertained his friends at a dinner and smoking concert in St Andrew's Hall, February 4th. Sir Frederick Borden, in proposing the health of Sir James, spoke very highly of the work he had done for the medical profession of Canada. Sir James in returning thanks indulged in many interesting reminiscences of his experience during his fifty years of almost continuous professional work.

Sir James was born in Scotland, but came out to Canada when a young lad with his father, a physician, who settled in Glengarry County. He was educated in Queen's and McGill Universities, and passed his examination for M.D. in the latter in 1853. Since that time he has practiced, and we hope will continue to practice for some time to come, in the city of Ottawa. He has always been a broad-minded and public-spirited man. For our profession he has done much, especially in connection with the Canadian Medical Association. He has also done much work for Canada in connection with matters non-medical.

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He was an intimate friend of Sir John Macdonald, who induced Sir James to enter the arena of Canadian politics. Here he was eminently successful, and was one of Sir John's most active lieutenants. During recent years he has taken an active interest in the question of the proper treatment of victims of tuberculosis. He received the honor of Knighthood in 1891. We are pleased to be able to say that he is now in excellent health. Long may he remain so!

## TRINITY MEDICAL COLLEGE.

There have been many rumors during the last few months as to certain changes which are likely to take place in the relations existing between Trinity Medical College and Trinity University. It is probable that the Medical School will shortly become the Medical Faculty of the University. It is also proposed to erect a new and modern medical building for the new Faculty. These proposals do not necessarily mean that federation of Trinity with Toronto will not take place, but they indicate that the prospects for such federation are not so bright as they were some time ago. The recent improvement in the financial conditions of Trinity, brought about through the skill, tact and energy of Provost Macklem, seems to have made that University more hopeful as to its future, and more independent in its negotiations. We are told by some that unless Toronto yields to Trinity's stipulations regarding the respective relations of Trinity and University Colleges to the central University, there will be no Federation. We understand that the Provost is preparing a definite statement of Trinity's position which, when published, will be read with much interest by many who appear to have extremely vague ideas about these matters now. In any case we should suppose it wise on the part of the Medical College to enter into the proposed closer relations with the University. In connection with the proposal to erect a new medical building, it might be well for Trinity and its friends to remember that the present success of the Medical Faculty of Toronto University is largely due to the Science teaching in the primary branches. To erect new buildings and provide equipments equal to those of Toronto would now cost pro-

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bably about seven hundred thousand dollars, and if Toronto is going to keep abreast of the times much additional expenditure will be required in the near future. We believe, however, that the Provost and many others interested in Trinity quite appreciate the importance of this aspect of the subject, and are quite willing to federate on certain conditions, the particulars as to which we shall learn before long.

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## THE MUSKOKA COTTAGE SANATORIUM.

We have received the Medical Report of the Muskoka Cottage Sanatorium for its fifth year—ending September 30, 1902.

The physician in charge, Dr. J. H. Elliott, states that the results have far surpassed those of any previous year. There has again been an increase in the average length of stay, and it is hoped this will continue in the future.

We extract the following from Dr. Elliot's report :—

In my last report I stated that we had found our tents unsatisfactory for occupation by patients during the wet months of spring and fall, and during the heavy snowfalls of winter; to replace them we had built as an experiment three canvas shelters, with board floor and shingled roof, each for two patients. These, now known as "shacks," have proven most satisfactory except in the matter of size. At the close of the present year two others have been built, somewhat larger than the first, and are now occupied. These have augmented our facilities for outdoor life for our patients. I have seen no such structures in any of the sanatoria visited, but have no doubt that now their efficacy is becoming known they will be adopted elsewhere. A number of our patients since leaving have had them built at home, and are living in them, maintaining fully the improvement made while under treatment here.

May I draw your attention to the results in the tabulated statement, showing that out of 102 patients treated 28 were discharged apparently cured, and 45 with disease arrested. Of these 45 I have every reason to believe that at least 22 would have progressed to apparent cure had they remained under treatment a sufficient length of time, *i.e.*, a possibility of 50 per cent. of apparent cures in those accepted for treatment.

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You will also notice that of 84 patients with bacilli in the sputum on admission, 31, or 37 per cent., became free under treatment.

Even more interesting and gratifying are the results shown in those patients who remained under treatment over three months. 80 appear in this class; of these 28, or 35 per cent., were apparently cured, and 40 or 50 per cent. had the disease arrested, with 4 or 5 per cent. much improved, *i.e.*, of patients remaining under treatment from three to twenty-three months, 85 per cent. were either cured or had the disease arrested, while but 10 per cent. failed to improve.

## TREATMENT OF INEBRIATES.

We would remind our readers of the proposed bill for the treatment of inebriates the Ontario Government is asked to adopt this session of the Legislature, and to which we called attention last month. The provisions of this bill have the endorsation of the medical profession, as expressed by the Canada Medical Association, the Ontario Medical Association and the Toronto Medical Society; but so far as we know, no committees have been appointed to bring the influence of the profession to bear upon our Legislature, unless it is understood that the Public Health Committee of the Ontario Medical Association is expected to act in that capacity. It is not too late for this committee and the Toronto Medical Society to take action in the matter, if this has not been done already. The proposed bill is understood to have the approval of the Government, and we know of no reason why it was not adopted years ago. We trust each member of the profession will realize his responsibility in the matter and bring his influence to bear —and at once—upon his representative in the Legislature. The profession has practically the matter in their own hands. The members of the profession can influence the Legislature (through their representatives), and the Legislature can influence the Government. *Verbum sap.*

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## MEDICAL ITEMS.

The Fourteenth International Medical Congress will be held this year in Madrid, from April 23 to 30.

We understand that certain physicians of Montreal, after an extended trial of anti-streptococcus serum in severe cases of scarlet fever, have abandoned its use.

The Secretary of the Canadian Medical Protective Association has issued a third circular letter to the medical profession asking physicians to become members. The fee for membership is $2.50. Send your name and fee to Dr. F. W. McKinnon, Ottawa.

The executors of the estate of the late Hart A. Massey have contributed, on behalf of the estate, a subscription of $5,000 to the fund for the erection of a Convocation Hall for the University of Toronto. The subscriptions now amount to about $30,000. The full amount required is $50,000.

At the annual meeting of the British Columbia graduates of McGill University, held February 14th, Dr. D. H. Harrison, the oldest graduate in that province (1864), was elected to the presidency. Dr. McGregor, Vancouver, founder of the society, was re-elected secretary; Dr. Tunstall, Vancouver, treasurer, and Dr. G. H. Manchester, New Westminster, one of the vice-presidents.

The annual meeting of the Board of Governors of the Victorian Order of Nurses was held March 5th at Government House, His Excellency the Governor-General presiding. The reports showed the order to be flourishing all over the Dominion, and that $50,000 was raised last year. Her Excellency has now under way a scheme for raising an endowment fund, the interest of which shall go to maintain the central work.

A new Therapeutical Society has recently been established in England, with Sir William Thistleton-Dyer, K.C.M.G., F.R.S., as president. Sir William is the Director of Kew Gardens in succession to the late Sir William Hooker, K.C.B. It is purposed to have a central bureau, where explorers and others can bring the results of their researches among foreign races, civilized or otherwise, on matters of therapeutical interest. The meetings are to be held in the rooms of the Apothecaries' Company.

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A deputation, headed by Dr. Robert Ferguson and Dr. H. A. McCallum, of London, Ont., recently waited on the Ontario Cabinet at Toronto, presenting a request that an institute of hygiene be established in London in connection with the Western University. The Government has replied that they can not at present accede to their application.

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**An International Congress on Tuberculosis at St. Louis.**

It is announced that a World's Congress on Tuberculosis will be held in St. Louis on July 18-23, 1904. The work of organization is being carried on as rapidly as possible by the committees appointed by the American Congress on Tuberculosis, which is now a permanent body and is, we understand, incorporated under the laws of Georgia. An advisory committee, composed of the heads of the medical corps of the army and navy, and of many presidents of health boards and other sanitarians in the U.S. and Canada, has been appointed. The secretary of the organization is Dr. George Brown, of Atlanta, Ga.

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**Canadian Medical Association.**

The thirty-sixth annual meeting of the Canadian Medical Association will be held in the city of London, Ontario, on the 25th, 26th, 27th, and possibly the 28th of August, under the presidency of Dr. Walter H. Moorhouse, of that city. Dr. Matthew D. Mann, of Buffalo, has been asked to deliver the Address in Gynecology, and Dr. Alexander Hugh Ferguson of Chicago, the Address in Surgery. Recently the president appointed Dr. R. W. Powell, Dr. T. G. Roddick, M.P., and Dr. E. P. Lachapelle, a special committee in regard to the establishment of a proposed Dominion Health Bureau. This committee recently waited on Sir Wilfrid Laurier at Ottawa, with the result that the Premier has promised the proposal consideration. Dr. Moorhouse has also delegated Dr. C. F. Martin, Montreal, to the International Medical Congress at Madrid. Already arrangements are well in hand for a splendid meeting at London. Further announcements will appear in the Canadian medical press from month to month.

GEORGE ELLIOTT,
*General Secretary.*

129 JOHN ST., TORONTO.

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# Personals.

Dr. Hugh G. Roberts (Trin. '85) has removed from New Germany to Galt.

Dr. R. B. Nevitt, of Toronto, left for a trip to the Southern States, March 7th.

Dr. Goldwin Howland has recently passed the examination for M.R.C.P., London.

Dr. Rudolph W. D. Parker was married February 4th to Miss Burrows, of Kingston.

Dr. John Standish (Tor. '70), of Wallaceburg, has sold his practice to Dr. A. Turner, of Southwold.

Dr. George McDonagh, after spending a few weeks in Jamaica, is now on his return journey to Toronto.

Dr. Wm. Gunn, of Clinton, is President of the Huron County Alumni Association of the University of Toronto.

Dr. Charles J. Hastings, of Toronto, returned to his home, February 24th, after spending a fortnight in Baltimore.

Dr. S. H. McCoy, of St. Catharines, has passed the examinations for the double qualifications of M.R.C.S. Eng. and L.R.C.P. Lond.

Dr. J. A. Williams (Tor. '63) is one of the vice-presidents of the Oxford County Alumni Association of the University of Toronto.

Dr. C. M. Foster left Toronto February 15th and sailed from Boston for Jamaica, where he expects to remain for two or three months.

Dr. Robert T. Noble (Tor. '95), formerly of Brampton, has removed to Toronto, and is living on the corner of Jarvis and Gerrard Streets.

Dr. Robert Lorne Stewart (Tor. '84), who practiced for many years in Bolton, has removed to Toronto, corner of Church and Gloucester Streets.

Dr. Harold Parsons, of Toronto, has quite recovered from his attack of septicemia, through which he was confined to bed for about five weeks.

Sir William Turner has been appointed Principal of the University of Edinburgh, in which he was Professor of Anatomy from 1867 to 1903.

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Dr. George Badgerow is still in London, being lately engaged at work at the Brampton Chest Hospital. He expects to return to Toronto in a few weeks.

Dr. Jas. F. W. Ross, of Toronto, recently paid two visits to New York. While there he had important conferences with Dr. Guitéras about the Pan-American Medical Congress.

Dr. George R. Watson (Vict. '88), who settled in Wellington, Ontario, after graduating, and afterwards spent a few years in Toronto, is now practicing in Barkly East, Cape Colony, South Africa.

Dr. Osborne Totten (Trin. '85) has been appointed physician to the Indians at Kettle Point and Stoney Point, and also associate coroner for Lambton, in the place of Dr. Scott, deceased.

Dr. J. E. Lehmann (Tor. '93), assistant surgeon to the German Hospital, London, England, after a visit of about two months to Canada and the United States, has returned to London.

Drs. A. Primrose and George Peters spent a few days in New York during the first week of March, and visited several medical colleges especially with a view of learning all about their equipments.

Dr. Samuel Harvey McCoy (Tor. '92), of St. Catharines, and Dr. Wm. F. Frizzell (Tor. '98), of Kemble, have passed the examinations for the double qualifications of L.R.C.P., Lond., and M.R.C.S., Eng.

*The Laryngoscope*, of which Dr. D. Gibb Wishart, of Toronto, is the Canadian collaborator, has been greatly increased in size. We congratulate the editorial staff on the marked success of their efforts to produce a good special medical journal.

Dr. A. J. G. MacDougall, who recently spent some time as one of the surgeons in charge of the Boer prisoners of war at Bermuda, and went with a portion of them to South Africa, has returned to Canada and commenced practice in Toronto.

Dr. L. L. Palmer, of Toronto, who is at present staying at the Welland, St. Catharines, is rapidly recovering from the effects of his attack of septicemia. He paid a flying visit to Toronto during the last week of February, when his friends found him remarkably improved in appearance. His general health is good, but there remains some weakness of the left arm, with impaired mobility of the wrist and finger joints. Massage and exercise are slowly but surely bringing back tone to the weak muscles and limbering the stiff joints.

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Dr. George Steacy has been appointed treasurer of the United Counties of Stormont, Dundas and Glengarry.

Dr. Colin Campbell (Trin. '00), who, after serving his term as house surgeon to the Toronto General Hospital, acted as surgeon to the steamship *Empress of India*, is now on the house staff of the Royal Ophthalmic Hospital, London, England.

At the time of writing the condition of Dr. Gilbert Gordon, of Toronto, who is at Dr. Howard Kelly's Hospital, Baltimore, is very serious. His brother, Dr. Andrew Gordon, went to Old Point Comfort, March 9th, and found Dr. Gilbert so ill that he thought it advisable to bring him to Baltimore.

The following graduates in medicine were present at the first annual dinner of the University of Toronto Club of New York, January 30th: Drs. W. A. Goodall, A. H. Montgomery and A. R. Robinson. President Loudon, of the University, was the guest of the evening, and received a most enthusiastic welcome.

Dr. D. J. Cunningham, F.R.S., who has been for some years Professor of Anatomy in the University of Dublin, has been invited to succeed Sir William Turner as Professor of Anatomy in the University of Edinburgh. The Curators of Patronage had previously ascertained that Dr. Cunningham was willing to accept the appointment.

Our friend Dr. Donald Armour, who took both F.R.C.S. Eng. and M.R.C.P. Lond., is doing well in London, England. He is Senior Demonstrator of Anatomy, University College; Assistant to the surgeon in charge of the Ear, Throat and Nose Department University College Hospital; Senior Assistant Surgeon Belgrave Hospital for Children; Hon. Surgeon St. Marylebone General Dispensary. He lives at 89 Harley Street, W.

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# Obituary.

## HERMAN MYNTER, M.D.

Dr. Herman Mynter, one of the most prominent surgeons of Buffalo, died of arterio-sclerosis, aged 57.

## JOHN W. HODGKINSON, M.D.

Dr. Hodgkinson, formerly a well-known physician in the eastern part of Toronto, died at 238 Farley Avenue, January 29th, aged 78.

## GEORGE MOTT, M.C.P. & S.O.

Dr. Mott, who, after receiving his license in 1869, practised for many years in Petrolea, died at Wallaceburg January 17th.

## GEORGE STEWART, M.D.

Dr. Stewart, of Port Rowan, died January 28th of apoplexy, aged 62. After graduating from Victoria in 1869 he practised for one year in Jossington, and then went to Port Rowan, where he practised until 1894, when he was appointed Collector of Customs.

## WILLIAM E. B. DAVIS, M.D.

One of the most distinguished sons of the "Sunny South" was Dr. W. E. B. Davis, of Birmingham, Alabama. For sixteen years he took a prominent part in various medical societies of the United States. In 1887 he commenced the important work of organizing the Southern Surgical and Gynecological Association, which held its first meeting in 1888. The pronounced success of that flourishing society was largely due to untiring efforts of Dr. Davis, who acted as Secretary until 1900, and was President in 1902. He was also a Past President of the American Association of Obstetricians and Gynecologists, and of the Tri-State Medical Association of Alabama, Georgia and Tennessee, and was an honorary member of the Medical

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Society of the State of New York. He was well known in Toronto, having visited this city in 1894 to attend the meeting of the A. A. O. and G., and also in 1897, when he was one of the guests at the Lord Lister banquet in the Toronto Club. Dr. Ross, of Toronto, was much shocked when he received a telegram, February 24th, stating that Dr. Davis had been killed that day on a railway crossing in Birmingham. At the time of writing we know nothing further as to the details of the accident. How old was this man who had occupied such a prominent position in the medical world of North America? Less than forty. He would have completed his fortieth year in November next if Providence had spared his life. Dr. Davis had a singularly charming disposition. Modest and retiring, he yet had great force of character and great ability as an organizer, a public speaker, and a surgeon. The *Buffalo Medical Journal*, whose editor, Dr. Potter, was one of Dr. Davis' most intimate friends, tells us that Dr. Davis expected soon to publish a book on the surgery of the liver, gall-bladder and ducts. The surviving relatives are his widow, two young daughters and his brother, who was also his partner in practice.

## CAIRD RYERSON MACLEAN, M.D., M.R.C.S., ENG.

Dr. Maclean, of Meaford, died February 16th, of apoplexy aged 66. He was graduated from Queen's, Kingston, in 1859, and acted as an army surgeon during the American Civil War. After its conclusion he practised in Meaford, where he was highly esteemed, being for a time Mayor of the town. He was for many years surgeon to the 31st Battalion and had attained the rank of Surgeon Lieut.-Colonel.

## THOMAS W. REYNOLDS, M.D.*

By JAMES RUSSELL, M.D.

Dr. Reynolds, who was assistant superintendent at the Asylum for the Insane, Hamilton, Province of Ontario, died at Baltimore on June 9th, last. He joined the medical staff of the asylum at Hamilton in 1885 as junior physician, and with the exception of a short interval at Mimico Asylum, he continued his official connection at Hamilton to the last.

He contracted a cold in the early part of 1902, accompanied with cough and hemorrhage from the lungs. He was advised

*Read at the Annual Meeting of the American Medico-Psychological Association, held at Montreal, Quebec, June 1902.

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to go South for the winter, and accompanied by Mrs. Reynolds and his little daughter, he went to Southern Pines in North Carolina, in the hope that the more salubrious climate of that region would improve his health. His letters from there to members of the staff were always cheerful, and he fondly looked forward to the time when he would again resume his duties which he loved so well.

In the early part of June he left Southern Pines for home, but stopped off at Baltimore to consult Dr. Osler, who was a personal friend and college chum at McGill University, Montreal. The fatigue of the journey produced fatal exhaustion upon an already debilitated system which was the subject of tubercular disease. He was sent to the Johns Hopkins' Hospital by order of Dr. Osler, where he received the best skill and the greatest possible kindness, but in spite of all he gradually sank and died the following day.

His untimely death at the early age of 45 years, and in the midst of his usefulness, was greatly lamented by his numerous friends, and especially at the asylum, where he was greatly beloved by everyone. He was a man of lovable disposition and generous impulses, and was never known to be out of temper. He was especially fitted for asylum work—was punctual and methodical in everything, and ever at his post. If he erred at all it was in too great devotion to his work. Ever anxious to serve others he thought least about himself, and in that sense he died a martyr to his professional duties and the great charity which was his life's work.

He was the second son of the late Dr. Thomas Reynolds, of Brockville, and was born on June 6th, 1858. He was educated at the public schools of Brockville and McGill University, where he took his degree in 1881. He began the practice of his profession in Hamilton, and in 1885 was appointed to the medical staff of the Hamilton Asylum, from which position he rose to be assistant superintendent. In 1890 he married Miss Mary L. Logie, daughter of the late Judge Logie, of Hamilton. His widow and one daughter survive, and one brother, Judge Reynolds, of Brockville.

Dr. Reynolds belonged to the Anglican Church and was an active member of St. Thomas' church, Hamilton. He was also a prominent Mason; was past master of Barton lodge, and was a member of the Scottish Rite. He was also a member of the Independent Order of Oddfellows, of which his father was the first Grand Master in Ontario.



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# Book Reviews.

**Manton's Obstetrics.** A Manual of Obstetrics for Students and Practitioners. By W. P. MANTON, M.D., Adjunct-Professor of Obstetrics and Professor of Clinical Gynecology, Detroit College of Medicine. In one 12mo volume of 265 pages, with 82 illustrations. Cloth, $1.00. Lea Brothers & Co., Publishers, Philadelphia and New York, 1903.

This, the fourth volume of Lea's Series of Medical Epitomes, presents a good summary of the essentials of modern obstetrics. For convenience in quizzing, a series of questions are given at the ends of the various chapters.

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**Constipation.** By G. SHERMAN BIGG, F.R.C.S.E.; late Surgeon-Captain Army Medical Staff; Sanitary Medical Officer, Thorncliffe Camp; Surgeon-in-Charge Native Followers' Hospital, and the Women's Hospital, Allahabad. London: Bailliere, Tindall & Cox, 8 Henrietta Street, Covent Garden, 1902. Price 2s 6d net.

It is quite unnecessary to point out the importance of the proper treatment of Constipation. We agree with the author in the statement that Constipation is the most frequent ailment to which mankind is subject, and affects all classes of men, women, and children, from the youngest to the oldest. Not only is it very common, but it is frequently difficult to cure. This excellent treatise will be found very useful for one who desires to learn as much as possible about a "complicated problem."

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**Progressive Medicine, Vol. IV, December, 1902.** A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 412 pages, 54 illustrations. Per volume, $2.50, by express prepaid. Per annum, in four cloth-bound volumes, $10.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

The concluding volume of 1902 begins with a remarkably thorough consideration of the most recent advances in the diagnosis and the treatment of Diseases of the Digestive Tract, including the liver, pancreas and peritoneum, by Dr. Einhorn. His discussion of affections of the gall bladder and pancreas will be found of especial value to the general practitioner. The study of these subjects has recently received an enormous impetus, and many hitherto obscure clinical manifestations are now found to be connected with pathological conditions of these organs. Dr. Bloodgood's section on Anesthetics, Fractures, Dislocations, Amputations, Surgery of the Extremities and Orthopedics is a thorough discussion of all these important topics, accompanied by a large number of valuable illustrations, Dr. William T. Belfield writes upon Genito-Urinary Diseases.

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giving especial attention to the much-discussed treatment of prostatic hypertrophy. Dr. John Rose Bradford, in the section on Diseases of the Kidneys, discusses very fully the many manifestations of renal diseases, their complications, and the most recent methods of treatment. The section on Physiology by Dr. Brubaker will prove of more than usual interest and value to the general practitioner. He describes fully the wonderful experiments and discoveries concerning life and vital reactions which have been made by Professors Loeb and Mathews. These have been so generally exploited in popular magazines, and have attracted such widespread interest that a scientific *resume* of their real value is a necessity to every medical man. Dr. Harrington's chapter on Hygiene relates the wonderful results attained by the practical applications of recent investigations into the cause and prevention of such diseases as yellow fever and malaria. The Therapeutic Referendum presents all the facts regarding the most recent remedies and methods of treatment. This feature alone would suffice to make the volume indispensable to the up-to-date physician.

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**Obstetrics.** A Text-Book for Students and Practitioners. By J. WHITRIDGE WILLIAMS, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-Chief to the Johns Hopkins Hospital; Gynecologist to the Union Protestant Infirmary, Baltimore. With eight colored plates and six hundred and thirty illustrations in the Text. Cloth, price, $6.00. New York and London; D. Appleton & Co., 1903.

Dr. Williams tells us that he has attempted in this book to set forth the scientific basis for and the practical application of the obstetrical art. We may say in a general way that his efforts have been highly successful. The plan of the work is very like that adopted by Jewett and Norris in the admirable text-books which they have edited. Apart from the chapters in Jewett's work, written by Williams, there is a somewhat striking similarity in the subject matter in the book by American authors and that written by the distinguished obstetrician of Baltimore. This may cause a slight feeling of disappointment in the minds of those who expect to find much that is new in Williams' book. The author expresses the hope that the book may prove serviceable as a laboratory guide to students. We have only to say in this regard that we do not know where students can find a better laboratory guide. It may be thought too voluminous for the average student, but it will be highly appreciated by the better class of students who desire to acquire the scientific basis upon which to found their knowledge of obstetrics. It will be found very useful for practitioners who desire a safe, reliable and complete book of reference for both the science and art of obstetrics. The illustrations are excellent and add much to the value of the book.

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**Medical Ethics and Cognate Subjects.** By JAMES S. SPRAGUE, M.D. Chas. P. Sparling & Co., Publishers, Toronto, 1902.

This is a very interesting book, written by a Canadian "Country Doctor" who was graduated from Victoria University in 1869, and since then has practised in Sterling, County Hastings. The author dedicates it to his patron, Dr. W. B. Geikie, and also to "the venerable names of Hodder, Bowell, Aikins, Wright, Ogden, Richardson and Croft, my Masters when a student in the Medical Faculty of Toronto University; to Rolph, Fulton, Sangster, Canniff, Barrick, Berryman and King, my Masters at Victoria University." The author also states that he claims no distinct originality, although he includes twenty or more of his own articles, which have appeared in medical and other journals. The chief value of the book depends on the compilation of admirable excerpts on matters of interest to our profession, taken from the writings of distinguished physicians from the time of Hippocrates down to the present time. The book contains all sorts of aphorisms, many anecdotes, and all sorts of very readable items. The price is only one dollar and a half. All Canadian physicians should have a copy.

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**Dr. Smiles.**

Dr. Smiles, the author of "Self Help," who celebrated the completion of his ninetieth year the other day, was a doctor "by first intention." He was born at Haddington in 1812, and educated at Edinburgh, becoming in due course a licentiate of the Royal College of Surgeons of that city. He practised as a doctor in Haddingtonshire for six years, but his tastes lay in another direction. His opportunity came to him earlier than to most men. He was offered the editorship of the Leeds' *Times*, and from the drugery of editorship he rose to be Secretary of the Leeds and Thirks Railway, and afterward of the South-Eastern. He is best known, however, by his books. In addition to "Self Help" he has produced "Lives of George and Robert Stephenson"; "Lives of the Engineers"; "A Life of John Murray"; "Thomas Edward, Scotch Naturalist"; "Robert Dick, Geologist and Botanist"; and a series of works of a homiletic character—Duty, Thrift, Character, Conduct, etc. The publisher to whom Dr. Smiles first offered "Self Help," when the Crimean War was raging, would not look at it. "People won't read anything of this kind," he said. After the book had lain for years on his desk, Dr. Smiles published it at his own expense. It at once became popular. Twenty thousand copies were sold in the first year, and since then its circulation has gone beyond the quarter million mark.—*British Medical Journal.*

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# Selections.

## SURGICAL HINTS.

In intestinal obstruction never give purgatives, for they are a source of distinct danger. If three or four copious high enemata do not produce the desired result, every minute of delay in performing an abdominal section becomes an additional risk.

Never pass a sound for the first time through a patient's urethra without having his head low, and take care to observe his countenance frequently. Patients once in a while will have an attack of syncope as a result of this procedure, which has been shown to be able to rapidly lower the blood pressure.

Primary syphilis of the fingers and hands, for obvious reasons, occurs more frequently in physicians than in any other class of people. Hence no physician is justified in failing to disinfect his hands with the utmost care after every examination of male or female genital regions or of mucous membranes. The worst way of diagnosing syphilis is by a culture experiment on the doctor himself.

The word catarrhal, as applied to appendicitis, may pathologically be correct enough, but it is a bad one to use in speaking with patients. It leads them to underestimate the possible gravity of even the mildest appearing case. It must be remembered that there is always danger until the attack is entirely over, and that a diagnosis of "simple catarrhal appendicitis," followed a few days later by need for an undertaker's services, is a poor advertisement for the doctor.

In aspirating for pleurisy with effusion, cough usually begins after a fairly large amount of fluid has been withdrawn. It may serve to some extent to break adhesions, and in moderation may be beneficial. But if the cough begins very soon, and interferes with the removal of a sufficient amount of fluid, measures must be taken to stop it. The needle may be withdrawn, and the operation repeated next day, after a moderate dose of opium has been given to quiet nervousness. Better still, leave the needle in place, shutting off the stop-cock, and tightly bandage the chest with a broad bandage, pulled more tightly as the fluid is removed. This strong support to the chest will usually stop the cough, and is a good routine measure to adopt in all cases of pleuritic effusion.—*International Journal of Surgery.*

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### Transitory Circumscribed Edema.

M. Bayet (*La Tribune Medicale*) presented to the Belgian Society of Dermatology and Syphilography a man, aged sixty years, who had been attacked a year and a half previously by fugacious circumscribed edema, which appeared upon different parts of the body. It came first upon the fingers, then upon the hands, the forearm, the scrotum, penis and eyelids. The tongue was also involved, sometimes upon one and sometimes the other side. The lesions, the size of which ranged from ten to twenty centimetres (about four to eight inches), were very fugacious, and lasted from twelve to twenty-four hours. They then disappeared without leaving any trace. There was a cardiac murmur, with irregular action. The complexion was subicterode and the liver was somewhat enlarged. There was neither albumin nor sugar in the urine. Two days previously the abdomen had suddenly swollen. Percussion revealed the presence of an effusion in the lower part of the abdominal cavity. This ascites, so suddenly produced, seemed to bear a relationship to the same causes which had previously given rise to the circumscribed edema. In fact, sudden effusions into joints, the meninges, and pleura, swelling of the parotid gland, and even edema of the lungs have been observed in connection with circumscribed edema of the skin. The speaker was not cognizant of any case in which ascites made a part of the symptomatology of the disease.—*The Medical Bulletin.*

### Effect of Hypnotism Upon the Circulation.

By means of sphygmographic tracings, Dr. Bérillon (*Jour. de Mèd. de Paris*, Dec. 27, 1902) has studied the effect of hypnotic suggestion and simple hypnotic sleep, without suggestion, upon the normal pulse and upon that of patients affected with functional circulatory disturbances. In a normal subject, slowing and acceleration of the pulse was obtained by suggestion; and in a hysterical subject affected with tachycardia, distinct diminution in the pulse-rate was induced by suggestion. Under the influence of simple hypnotic sleep, without suggestion, marked improvement was noted in the pulse and heart-action of a subject suffering from a functional cardiac affection. The effect of hypnotic sleep upon arterial tension was also striking; in those in whom the tension was above normal it was common to find an increase of more than 100 grams; while in subnormal tension the increase did not appear for some time, and it was necessary to prolong the sleep for several hours to obtain the best results. In cases of normal tension, the increase was even slower in appearing, and less marked. These effects could be produced only when the

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hypnotic sleep was rendered as nearly as possible like natural sleep; this being accomplished by repeated suggestions to the patient that he would sleep as quietly and restfully as though in his own bed, etc. Hypnotic suggestion was also effectively used in a case of hemianesthesia accompanied with subnormal arterial tension upon the affected side. Under hypnotic suggestion anesthesia was transferred to the opposite side, and with it the abnormal pulse appeared also upon that side.—*Med. News.*

**Chronic Bright's Disease.**

The following combination is recommended by Semmola as a drink in chronic Bright's disease:

℞ Sodii chloridi, ℥ iss.
Sodii phos., ℥ ss.
Sodii iodidi, gr. xv.
Aquæ puræ, ℥ xxxvj.

M. Sig.: Use pure as a drink or mixed with milk.—*Journal of the American Medical Association.*

**Toothache.**

When this condition arises from a diseased tooth in which there is a cavity, Mason recommends that a few drops of the following combination be placed upon a pellet of cotton and applied to the cavity:

℞ Linim. aconiti (B. P.).
Chloroformi, of each, 3 drachms.
Tinct. capsici, 1 drachm.
Tinct. pyrethri,
Olei caryophylli,
Pulv. camphoræ, of each, ½ drachm.
—*Philadelphia Medical Journal.*

**Tumor Complicating Labor.**

F. W. Kidd gives the history of a woman of 34, whom he saw when 4½ months pregnant and found she had a fibroma about the size of a hen's egg springing from the posterior wall of the cervix. As it encroached very little upon the cervical canal, it was deemed inadvisable to attempt any interference until the beginning of labor; when that time arrived, it was apparent that the tumor had so increased in size as to prevent the descent of the head, or the dilation of the cervix. Accordingly the tumor was enucleated through the vagina, and three days later a living child was spontaneously delivered. The mother was able to leave the hospital in four weeks, with the child doing well.—*Med. Press.*

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# A REPORT OF TWO CASES OF SEPTICEMIA, SUCCESSFULLY TREATED WITH $H_2$ $O_2$ MEDICINAL.

By E. J. MELVILLE, M.D., Bakersfield, Vt.

Case 1.—Feb. 6, 1894, was called to see Homer B., aged 14, who had been ill with a swelling in right groin for three weeks. Had been treated with hot applications, etc., but during that time abscess continued to grow, and at the time that I first saw him fluctuation could easily be made out. Temperature 102.5° F. Pulse 120. Great emaciation. Constant vomiting. Daily chills followed by copious sweating, denoting pus absorption. Diagnosed appendicular abscess and advised operation. This was done same day under local anesthesia.

Much pus escaped, and several small portions of fecal matter, denoting an opening into the gut.

Temperature remained high, and sweats continued for three days following operation, indicating the presence of pus. I then began the use of Marchand's $H_2$ $O_2$ medicinal, (15 vol.) so as to destroy the pus and morbid element which were still there. I injected 4 oz. of $H_2$ $O_2$ with a glass syringe slowly, while patient was in the Trendelenberg position, and allowed it to remain about fifteen minutes. The boy was then lowered and laid upon his right side, when large quantities of pus, broken down tissue and gas flowed from wound. By gentle compression and massage of abdomen, much more was obtained. Large quantities of sterilized gauze were packed over the opening in right side.

The flushing out with $H_2$ $O_2$, etc., was repeated every twelve hours.

The improvement was prompt. Temperature reached normal, and remained so after forty-eight hours.

Wound was now washed out with the $H_2$ $O_2$ daily for four weeks, after which time the abdominal wound and fecal fistula were entirely healed. Patient has since developed into a full-grown laboring man, and has had no hernia nor any outward symptoms of his severe illness.

Case 2.—March 2, 1897, was called to see George T., a farmer, aged 38 years, who had been in the care of a Christian Scientist for four weeks for a large swelling in right side. The treatment consisted in endeavoring to persuade the man that he was not ill, and insisting that he take active exercise. Found patient in recumbent position with knees flexed upon abdomen, and suffering intense pain over right side of abdomen, which was filled with a soft fluctuating mass. Temperature 103.8° F. Pulse 130. Opened abdomen under local anesthesia and evacuated three quarts of foul smelling pus.

Used 4 oz. $H_2$ $O_2$ full strength, slightly warmed, after pus

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had ceased to flow, and repeated procedure every twelve hours.

This caused cessation of all untoward symptoms for eight days, when chills and fever returned.

Another swelling was then noticed in right lumbar region, which, upon opening, gave one quart of pus.

Flushed this second abscess in same way. The temperature soon reached normal, and patient made an uneventful recovery with exception of swelling of inguinal glands in left groin, which yielded in three days to hot fomentations.

For conclusion, I might say that in the above cases I used no medicines internally, and nothing externally but clean linen, plain gauze and $H_2 O_2$ (Marchand's).

The operations performed were simply opening abscesses, no drainage tubes, no flushing with salt solution or water, and no packing of abscesses.

Though I used the $H_2 O_2$ in large quantities, and made no especial effort to see that all the solution returned, and though it was used over a period of several weeks, no untoward symptoms developed from its use.

The above gratifying results induced me to use Hydrozone (which yields 30 times its own volume of nascent oxygen instead of 15 volumes) in other cases where a large amount of pus was present, with such good results that I am now giving the preference to this very strong solution.

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Grey Towers Sanitarium, Stamford, Conn., has again come into the hands of its former proprietor, Dr. F. H. Barnes. It will be conducted along the old line, with special attention to detail work and cuisine. Electrical-Therapy and Hydro-Therapy, as well as Massage, will be special features of the work. All communications should be addressed to F. H. Barnes, M.D., Stamford, Conn.

**Odd Tea-drinking.**

When the natives of Paraguay drink tea they do not pour it from a tea-pot into a cup, but fill a goblet made out of a pumpkin or gourd, and then suck up the hot liquid through a long reed. Moreover, the tea which they use is altogether different from that which comes from China, being made out of the dried and roasted leaves of a palm-like plant which grows in Paraguay and Southern Brazil. The natives say that this tea is an excellent remedy for fever and rheumatism, and chemical tests which have been made by German physicians seem to show that there is good ground for this statement. Certain it is that tea is widely used throughout Paraguay in cases of illness, and that, so far as has been observed, the effects produced by it are highly beneficial.—*New York Herald.*

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JAMES H. RICHARDSON, Esq.
M.D., TOR.; M.R.C.S., ENG.

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# The Canadian Practitioner and Review.

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## Original Communications.

### AN ANOMALOUS CASE OF TYPHOID FEVER.

BY ROBERT J. DWYER, M.B., TOR., M.R.C.P.

MR. PRESIDENT,—Typhoid fever is a disease with which we are all so familiar that one feels like apologizing for selecting it as an item for this evening's programme.

A recent case, however, which, through the kindness of Dr. Allan, I had the opportunity of studying, presented such atypical features in its onset and course, that I thought a recital would not only be interesting but also prove useful by pointing out the necessity for bearing this disease in mind, in any febrile condition, the nature of which is in doubt.

*History.*—The patient, a tailoress, aged 21, was admitted to St. Michael's Hospital, November 20th, 1902, with the following history: Several days previously she had swallowed a small cuff holder, and two days before admission, owing to severe epigastric pain, a physician was called in. She was then somewhat pale, the temperature was normal. The following evening she went to Dr. Allan's house, and while there was seized with a severe hematemesis, losing about half a wash basin of blood. The next morning she came to the hospital; there she complained of nausea and much epigastric pain and weakness; she was very pale, temperature, 98⅘; resp. 24; pulse, 80. During the next four days she had six hemorrhages in all, the amounts lost varied from a pint to three ounces or less. On the fifth day the nurse reported the stool as being very free and dark in color. For the first nine days the temperature fluctuated between 98.4 and 99.4, once going up in the evening to 100.1. On the tenth day it ran up suddenly to 102, and for the next two weeks kept ranging between 102

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and 103, once going up to 104, but at no time did it go below 102. At the end of the two weeks it went up to 104.3, and from that time till death, a week later, was never more than 103.

A notable feature of the temperature was the absence of variation between the morning and evening register. Up to the time I saw her on the 19th day, the general features of her illness were the fever, occasional vomiting, epigastric tenderness and sleeplessness. The pulse rate had gradually increased during this period, from 80 to 112. Her condition at this time was as follows: Temp. 103, resp. 22, pulse 112, a slight cough, she was blanched and somewhat emaciated, tongue moist and thinly coated, complained of great weakness, there was some mental dullness; she answered intelligently, but slowly.

*Physical Examination.*—Lungs clear, short cardiac systolic murmur at the apex very limited in extent, however, the abdomen very firm and markedly retracted, complained of considerable pain and tenderness in the epigastrium, neither the liver nor the spleen could be palpated, but the area of dullness of the latter was slightly increased. Careful search failed to discover any typhoid spots, and indeed there was little in the appearance of the patient to suggest this disease unless it would be the slight splenetic enlargement. At this time, too, some stiffness of the arm and legs and back, and some fine tremor of the hands were apparent. These latter symptoms were not sufficiently pronounced to materially interfere with movement, and were ascribed to the weakness and abdominal tenderness, especially as they were most marked when attempting to turn her for examination.

Blood was taken for a "widal" test, and the report three days later was "slightly positive." On subsequent inquiry, however, I was told that it was not sufficient to be diagnostic. Up to this time the patient had been fed mostly per rectum, and as it was deemed that sufficient time had elap-ed more liberal feeding by mouth was ordered. This was taken and well borne. On the next day for the first time there was slight abdominal distension, which gradually became more marked, and persisted in moderate degree till death. Three days later she began to be delirious and have involuntary evacuations, all her symptoms becoming gradually worse, finally ended in death ten days later.

During the last week or so the tremor and rigidity became more pronounced, being somewhat more marked on the left side, the arms kept rigid at the sides, the hands flexed, the fingers spread apart, the legs were held straight and rigid, and the feet were hyper-extended till the heels were in line with

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the calves, the head held rigidly in the middle line, and slighly retracted. Owing to the condition of the patient it was not possible to make any observation as to the sensory functions, neither knee jerks, nor extensor response were obtained.

Notwithstanding every care a bed sore was formed in the sacrum, and rapidly advanced. There were also indications of the same forming over the heels. The blood count made several days before death showed red 1,500,000, whites not increased.

*Post-mortem Report.*—The body showed marked emaciation. Rigor mortis and *post-mortem* staining also present. On further inspection a number of punctate cutaneous hemorrhages were found in the left groin and inner side of thigh. Over the sacrum was a circular bedsore about three inches in diameter and extending into the muscular and tendinous structures.

*Section.*—On opening the abdomen the intestines were seen to be pale and moderately distended, and further examination of these showed about a dozen healing typhoid ulcers, situated in the lower two feet of ileum. Otherwise there was nothing of note in either the large or small bowel. The stomach was moderately distended and contained a quantity of fluid. About midway between cardia and pylorus, and less than an inch in front of lesser curvature was a shallow depression, circular in outline and almost a quarter inch in diameter. It extended through the mucous mem, and had no appearance of inflammation about its edges. In short, it presented the appearance of a healed ulcer. At the lesser curvature, and about opposite the one just mentioned, were three larger and more irregular depressions with red injected edges. These were not so deep as the first, and did not present the typical appearance of gastric ulcers. The spleen was considerably enlarged and soft. The kidneys were normal in size, and the capsule was more adherent, cut surface was somewhat pale. Liver normal in size and pale on section.

*Thorax.*—The lungs presented the appearance of passive congestion in dependant parts.

*Heart.*—The pericardium contained almost ℥ iv. of clear serous fluid. The organ, as a whole, was pale and soft, but not friable. The right side was occupied by *post-mortem.* Thrombi valves normal, except for slight thickening of mitral cusps. The spinal cord was also removed up to and including portion of the cervical enlargement, but nothing abnormal was found, either in meninges or on section. Unfortunately no examination of the brain was allowed.

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# REPORT OF GYNECOLOGICAL CLINIC AT THE NEW YORK SCHOOL OF CLINICAL MEDICINE.

By AUGUSTIN H. GOELET, M.D.
Professor of Gynecology and Gynecological Surgery.

*Gentlemen,*—The first case I show you to-day is one of more than usual interest, because of the variety of conditions present and because the question, "What may be done to cure this patient?" requires discriminating judgment. She is only 29 years old, but has had three children and two miscarriages, the last being during the past year, and she is a complete physical wreck. If it were possible to get her away from her children and other household cares and build her up, it would be better to do that first before instituting any operative procedure for her cure, but in this class of patients such a course is not feasible.

Now what do we find on examination? We will first palpate the abdomen in the erect position, and without difficulty we discover the right kidney prolapsed to the fourth degree and the left to the third degree—quite enough to make an invalid of any woman, but there is more. Microscopic examination of her urine shows that there is already a pyelonephritis which is the result of the prolapse. Now that you have all been able to make out the prolapse of both kidneys to your entire satisfaction, we will place the patient in the recumbent position, and again palpate the abdomen. You observe that the right kidney can be made out in this position without difficulty, but the left comes down only to a limited extent on deep inspiration. In fact, if this patient was not so thin, it would be difficult to palpate even the lower pole of the left kidney, and unless we had examined her previously in the erect position, we would very readily overlook the displacement on this side. Examination of these cases only in the recumbent position is frequently the cause of failure to detect prolapse of this organ.

We will now proceed to examine the pelvic organs. You observe that there is a very marked cystocele with an incomplete laceration of the perineum, and when she is made to strain the cervix presents at the vulva.

This is badly lacerated also. Upon digital examination we find the uterus retroverted, with complete relaxation of the utero-sacral ligaments. Without the support of these ligaments the uterus will not retain its position in the pelvis. I regard them as the most essential support of the organ.

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Now what shall we do to cure this patient? That is what she has come for and what she is entitled to. I will ask you all in turn, what you would do for her if she consulted you in your private practice? You seem to hold a variety of opinions. One gentleman says he would remove the uterus to cure the prolapse. Would she then be cured? And would it be justifiable at her age?

Several operations will be required to effect a cure in this case, and if the patient was stronger they could all be done at the same time, but owing to her weak state I think it would be wiser to divide them, giving her ten days or two weeks between to enable her to recover her strength. On the next clinic day at the hospital I shall first fix both kidneys, and after curetting the uterus I will repair the cervix. This will be enough for her to endure for one day. Then two weeks later I will repair the perineum and do a ventral suspension. This will keep her in bed about four weeks.

I shall not attempt any plastic work on the anterior vaginal wall to overcome the cystocele, because when the uterus is drawn up and attached to the abdominal wall the vagina is drawn up with it and the cystocele will disappear. The result is more certain because the vaginal wall is now in a state of subinvolution. The patient will be cured, but the permanency of the result will depend largely upon the avoidance of pregnancy for at least five years.

The next case is also one of retroversion of the uterus with moderate rectocele. The patient is a widow, 38 years old, who was never pregnant. She complains of backache, bearing down pain in the pelvis, and menorrhagia. She has been treated with tampons before coming here, and has worn a pessary without permanent benefit. She says when the pessary is worn it irritates, and menstruation is more profuse and prolonged. You will observe on examination that the uterus is freely movable, and that it can be readily replaced, but that it does not remain so. You will observe also that there is complete relaxation of the utero-sacral ligaments, but the upper posterior vaginal wall is closely connected with the rectum and not separated from it, and relaxed as you so often find in these cases of retroversion in women who have borne children. The appendages are normal, but there is a chronic endometritis and the uterus is large and heavy.

On my next clinic day at the hospital, after curetting the uterus, I will do a simple operation in this case which I have under trial, and about which I have thus far said very little. It is unique in its simplicity, and in appropriate cases should prove very useful. Its object is to hold the cervix in the posterior cul-de-sac of the vagina and consequently in the hollow

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of the sacrum, so the fundus will fall forward and the intra-abdominal pressure will be exerted against the posterior face of the uterus. The technique is as follows, viz.:

The cervix is drawn forward, and the posterior surface of the vaginal portion of the cervix is denuded of its mucous membrane. Then a corresponding surface of the same area on the posterior vaginal wall well up in the posterior vault of the vagina is also denuded, and these two surfaces are united by means of sutures. This attachment takes the place of the disabled utero-sacral ligaments, and in those cases where there is not undue relaxation of the upper vaginal wall the result is very satisfactory.

In this case I will also narrow the lower part of the vagina by doing a posterior colporrhaphy, because of the rectocele, but as a rule in these cases where this operation is appropriate this is not required.

The next case I show you has also retroversion of the uterus, but in order to effect a cure here it will be necessary to do a ventral suspension. The patient, who is 28 years old, has been married nine years, and has had three children, the last, four years ago. You will observe in this case that there is complete giving way of the utero-sacral ligaments, and that the vagina is greatly relaxed, and is but loosely attached to the rectum at its upper part, but the uterus is freely movable and can be replaced. Hence the operation that I would do in the last case, which I have designated "Posterior Cervico-vaginal Fixation," would not be appropriate here. Neither would shortening of the round ligaments be effective, because these ligaments when shortened do not hold the uterus up in the pelvis, though they may draw the fundus forward against the pubes. Hence, after this operation, the organ would sag down in the pelvis, and we would have prolapse, which may cause quite as much inconvenience as the retroversion.

Therefore, in this case, I believe a ventral suspension is the only positive means of cure. I do not hesitate to do this operation in appropriate cases, when the uterus is freely movable as well as when it is fixed, and during the child-bearing period, because the operation *per se* has no mortality, and when properly done it does not interfere with subsequent pregnancy.

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# SYMPTOMS AND TREATMENT OF CALCULUS ANURIA.*

By E. L. KEYER, Jr., M.D.

Calculous anuria may claim your attention, not because of its frequency, nor because of the vague and irregular nature of its symptoms—for it is not frequent nor are its symptoms other than absolutely characteristic—but calculous anuria may claim the respect of every practising physician because it is a condition which, though grave and threatening rapidly fatal issue, shows during the greater part of its progress no signs adequate to arouse alarm in the mind of the patient or of his doctor.

It is to all appearances a perfectly benign condition. The patient walks about almost entirely well and quite free from fear of any imminent danger, when suddenly the crash comes, the diseases culminates in an explosion of intense uremia. Hence most practitioners fail to realize the gravity of the patient's condition until it is too late; although the one reason why they do not make the diagnosis sooner is because they do not attach sufficient importance to it. Therefore, in calling your attention to-night to the diagnosis and treatment of calculous anuria, I might be more explicit and say that I wish to impress upon you the necessity of a timely diagnosis in order that you may be able to institute successful treatment.

Calculous anuria, as the name indicates, is a condition in which the kidneys cease to secrete urine because of calculous obstruction. In order to understand the mechanism of this, you must recognize that the kidney ceases to secrete for one of two reasons. Either its duct is obstructed or it is intensely congested. You are doubtless more or less familiar with the condition of hydronephrosis and dilatation of the kidney on account of some obstruction to the outflow of urine through the ureter. Inasmuch as stone is a fairly frequent cause of hydronephrosis, we must distinguish between the obstruction by stone which causes dilatation of the kidney and the obstruction by stone which causes anuria. The distinction is this: If the stone obstructs the ureter suddenly and completely, the kidney does not dilate, the urine which it secretes into the pelvis finds no means of escape, presses back upon the secreting structure of the organ, and causes an intense congestion, which is followed by a cessation of function, and ultimately, if the

* Paper read before the Clinical Society of the New York Polyclinic Medical School and Hospital, December 8th, 1902.

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patient survives and the obstruction is not relieved by atrophy of the organ.

On the other hand an imperfect, gradual, or intermittant ureteral obstruction—whether by stone or by anything else—causes an increase of pressure, which is only relative, and which varies in intensity from day to day, as a little urine escapes around the obstruction; and the result of this irregular back-pressure is a gradual dilatation and forcing outward of all parts of the kidney pelvis, so that finally hydronephrosis is produced.

Thus calculous anuria is caused by sudden and complete obstruction of the ureter, while hydronephrosis is caused by gradual, incomplete or intermittent obstruction. Post-mortem examination of the kidneys of persons dying from calculous anuria habitually discloses complete obstruction of only one ureter. But the opposite kidney is in almost every case seriously diseased. So that when the ureter of one kidney is obstructed the opposite one is not able to eliminate the necessary quota of excrementitious matter, and it too gives way—but gives way slowly—under the strain put upon it. Were this not the case, and were it possible for fatal calculous anuria to occur with the unobstructed kidney in a normal condition, every nephrectomy would be likely to be quite as serious a matter as calculous anuria; for nephrectomy, by removing one kidney, has very much the same effect as has the complete obstruction of one ureter.

Legueu has recorded thirty post-mortem examinations of cases of calculous anuria, and Morris has collected twenty-eight Legueu found the opposite kidney absent thrice; atrophied and otherwise damaged by calculus in twenty instances, while in six there had been previous obliteration of the opposite ureter. In Morris's cases the opposite kidney was absent six times, atrophied or otherwise almost entirely disorganized twenty times, and much enlarged, presumably by congestion, twice. In only one of these fifty-eight fatal cases was the opposite kidney in anything like a normal condition; and in that case there was a slight evidence of parenchymatous nephritis. Hence, Legueu has justly inferred that calculous anuria is caused by three factors: first, a long standing change in one of the kidneys, markedly impairing its function, or else a complete atrophy or absence; second, a recent or recently aggravated lesion of the principal kidney, this lesion being mechanical and caused by the calculus; third, a reflex inhibitory effect upon the disorganized kidney leading to complete suppression of its imperfect functional power.

Hence we must understand that the existence of calculous anuria means that the patient has been living for some time

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past chiefly on the functional activity of one kidney, and that the anuria is due to mechanical obstruction to that function and reflex inhibition to the action of its fellow.

Such is calculous anuria. Its symptoms are classified in three stages: first, the premonitory stage; second, the tolerant stage; third, the uremic stage. In the premonitory stage there is more or less pain referred to the kidney, and this may be an index of the kidney chiefly affected. This stage lasts a few hours, or perhaps a few days. The patient then passes into the second stage of the disease. In this, the tolerant stage, there are no symptoms whatever, except the absence of urination. There is no pain, there is no sensation of discomfort, weakness or sickness. The patient goes about his business, eats, drinks, works, as usual, but urinates little or not at all. He may go on in this way for three or four days, or a week, passing not more than two or three ounces of urine a day, or there may be a let up in the symptoms and a copious outflow of urine, after which the anuria may occur.

As I have already remarked the diagnosis of calculus anuria in this stage of the disease is a matter of no great difficulty; but the complete absence of any grave symptoms is what throws the physician and his patient off the scent; and the absence of urination is regarded as a merely temporary and insignificant matter, until the third or uremic stage shows the gravity of the condition and usually determines the patient's fate.

This third stage comes on gradually, with such suggestive symptoms as hiccoughing, headaches, insomnia and nervousness, a rapid tense pulse, vomiting and subnormal temperature. These symptoms rapidly grow worse, the vomiting grows more severe, the intellect becomes dull and stuporous, the patient's mind may wander, he may have maniacal attacks, the intestines are distended and may be filled with gas, and in a few days the patient sinks and passes away.

In 20 to 28 per cent. of all cases the patient recovers from the attack, either by the passage of the stone or by its slipping back into the kidney pelvis in such a way as to relieve the obstruction.

Such are the symptoms of what Morris has aptly termed the gravest and the most fatal of the many serious complications of urinary lithiasis.

Of the diagnosis of the disease I need speak no further. I hope I have sufficiently impressed upon you the necessity of forseeing grave danger lurking behind the apparently superficiality of the attack while in the tolerant stege. I know of no disease that can be confused with calculous anuria, unless it be hysterical anuria. This may simulate calculous anuria

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quite closely, just as hysteria may simulate almost any condition. It is not possible to give any hard-and-fast criteria by which to distinguish the two diseases; but a careful study of any case should distinguish the hysterical element when present.

The treatment of calculous anuria is obviously single—it is the knife. Henry Morris, who is the greatest authority on this subject, states "so useless is medicinal and expectant treatment that I have refused to attend consultations in cases of calculous anuria unless I have permission beforehand to operate at once if I think the case suitable." This is the proper attitude to assume. The patient may insist that he is entirely well; but the well-informed practitioner cannot afford to allow himself to be deceived until it is too late, until the uremic stage has come, and the patient's chances of recovery are practically lost.

Among Morris's operations twenty-one were performed on or before the fifth day of the disease, with a mortality of 30 per cent. Sixteen operated on after the fifth day gave a mortality of 50 per cent.; after this a 75 per cent. mortality in cases not operated upon.

There is one further point to which I wish to refer, that is the choice of operation. Patients in these cases, no matter how seemingly well they may be, are in reality suffering from a grave disease, hence the operation for the relief of calculous anuria should be of the simplest possible description.

No attempt should be made to extirpate the kidney, or to investigate for the presence or absence of calculus beyond inserting a finger rapidly into the pelvis. Indeed, if the calculus is large and impacted, it would seem wiser not to disturb it, even though it were readily excised. All that the patient requires is simple nephrotomy and drainage of both kidneys, and nothing else should be attempted upon him at that time.

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# Selected Articles.

## GENERAL PUERPERAL SEPTICEMIA TREATED BY INTRA-ABDOMINAL IRRIGATION WITH NORMAL SALINE SOLUTION; RECOVERY.*

BY JAMES HAWLEY BURTENSHAW, M.D.

Adjunct Professor of Gynecology in the New York Polyclinic Medical School and Hospital New York.

A number of cases have been reported in which the abdominal cavity has been subjected to irrigation for puerperal sepsis, with indifferent results; but the accompanying report is unique, so far as I am able to determine, on account of the length of time the irrigation was practiced, the effect of the irrigation on the kidneys and peritoneum, and the ultimate recovery of the patient without the ordinary sequels of septic peritonitis.

The patient was a French woman, aged 24, unmarried, secretary to a woman of considerable wealth. She became pregnant during the latter part of August, 1902. During October and November she made frequent attempts to produce abortion by means of various drugs, hot water vaginal douches and the like, but unsuccessfully. Early in December a meddlesome woman friend initiated her into the mysteries of instrumental procedure, and during the evening of December 9th she inserted an ordinary wooden penholder into the cavity of the womb and allowed it to remain there until the following morning. The membranes were not ruptured by this maneuver, but it was followed by the appearance of considerable blood, undoubtedly from a wound of the endometrium.

Abortion occurred during the afternoon of the 10th. The girl remained in bed until the next morning, when she arose, dressed and resumed her usual duties about the house. I was summoned to see her at midnight, December 16th. She had then been confined to bed two days. I found her temperature to be 104.4 F., her pulse rate 120, and her respiration rapid and shallow. She was somewhat delirious. Her abdomen was greatly distended, and was sensitive to the touch. The uterus was enlarged and soft, and the lochial discharge was scanty in amount and very offensive. From the housekeeper I learned that she had had several protracted chills, had vomited a num-

*Read before the Polyclinic Clinical Society.

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ber of times, and, to the best of the housekeeper's knowledge, had urinated but once during the previous twenty-four hours.

I catheterized her, and drew off all the urine the bladder contained, about four ounces. Later examination of the specimen demonstrated a specific gravity of 1,031, numerous hyaline casts, and a considerable amount of albumin. I may state here that a blood examination the following day showed the presence of almost innumerable streptococci, while the uterine scrapings developed streptococci and staphylococci in great numbers.

I flushed out the uterine cavity with two gallons or more of hot water, and, under very superficial chloroform narcosis, gently curetted it with a broad curette, taking great care not to abrade the endometrium. Considerable foul-smelling placental tissue and blood-clot were removed in this way, and the cavity was again copiously irrigated, this time with a 1 per cent. solution of lysol. I then introduced a suppository containing one dram of iodoform, fifteen grains of starch, and glycerin into the uterus, and packed that cavity and the vagina lightly with iodoform gauze. Nearly a quart of hot solution was then slowly introduced into the bowel, but the retention of even a small quantity of the fluid caused the patient so much pain that the enteroclysis was not persisted in. Meanwhile, I had opened the median basilic vein of the left arm and withdrawn about eight ounces of blood. This was replaced by about eleven ounces of hot normal salt solution. Marked improvement in the patient's pulse and respiration was at once manifest. Her body was then sponged with tepid water and alcohol, cloths wrung out in ice water were applied to her head and abdomen, and she was again catheterized. Two ounces of urine was obtained. A rather free, loose bowel movement had resulted from the attempt at enteroclysis. It was my intention to practice continuous irrigation of the bowel with the salt solution, but the patient complained so bitterly when the procedure was attempted that I desisted.

At 11 o'clock the next day, December 17th, her temperature was again 104 F., having dropped during the early morning, after the infusion, to 103; her pulse was still 120, her breathing was rapid, and coma was developing. Only seven ounces of urine had been obtained by catheter. Subcutaneous infusion of saline solution was resorted to, the sites of the injections being the anterior border of the right axilla and under the left breast. The uterine and vaginal dressings were removed and a second iodoform suppository was introduced into the uterus, both cavities again being packed. The posterior vaginal fornix was markedly distended, owing to the presence of fluid in the peritoneal cavity. Absorption from the cellular tissue was

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extremely slow, although the patient showed temporary improvement after the injections were begun. Enteroclysis was again practiced, but with very unsatisfactory results.

I had intended to open the posterior cul-de-sac and pack the pelvis with iodoform gauze, but the grave condition of the patient, especially the almost complete cessation of kidney function, appeared to preclude all hope of success attending this procedure. The approximate quantity of urine passed during thirty-six hours had been nineteen ounces.

It then occurred to me that thorough irrigation of the entire abdominal cavity with normal saline solution might accomplish several things: first, remove the collection of serum, which undoubtedly already was infected by streptococci; second, through absorption by the most extensive lymphatic system of the body, the kidneys would be more quickly and radically influenced; and third, the general agglutination of the peritoneal surfaces as a result of the inflammation might, to a certain extent at least, be prevented.

Digitalin, strychnin and whiskey had been injected hypodermatically at intervals since the night before. Several gallons of normal saline solution, prepared according to the formula of Locke, containing sodium chlorid, ʒ iiss; calcium chlorid, gr. 3¾; and potassium chlorid, gr. iss to the quart of sterilized water, was prepared and kept at a temperature approximating 110 F. A four-quart fountain syringe and tube were sterilized by boiling. The patient was given a few whiffs of chloroform, and I made a two-inch incision into the abdominal cavity midway between the umbilicus and pubes. A rubber pad was placed under her to catch the overflow, and the tube of the syringe was inserted through the opening as far as possible into the pelvis.

For one hour the solution was permitted to flow into the cavity without intermission. Several times during this period the patient was turned on her side, and once on her abdomen, and pressure was made on her flanks to facilitate the exit of the fluid. At first, when this was done, the fluid returned was of a yellow tinge and contained many lymph flakes, but later it came away perfectly clear. Twenty minutes after the irrigation was begun ten ounces of urine of a specific gravity of 1,024 was obtained by catheter, and fifteen minutes later, six ounces. At the end of the hour her temperature had dropped to 102.6 F., her pulse rate to 110, she was in a profuse perspiration, and her mental condition had greatly improved. In all, forty ounces of urine had been drawn from the bladder, the last being of a specific gravity of 1,013. Five ounces of whiskey had been given by the mouth. At one time syncope appeared to be imminent, but was averted by raising the foot of the bed to the level of a chair seat.

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At 10 o'clock at night the irrigation was repeated for half an hour. A self-retaining catheter had kept the bladder drained, and forty-eight ounces of urine had been collected. The bowels had moved freely twice. At midnight her temperature was 102 F., and her pulse rate 116. A third irrigation was practiced the following morning, again for half an hour, and at three-hour intervals until 1 o'clock the next morning the cavity was filled with the saline solution. The next day, December 19th, I closed the abdominal wound with stitches under cocain anesthesia. Her temperature then was 100.4 F., and her pulse rate 100. From 10 o'clock on the night of the 17th until noon of the 19th 210 ounces of urine were collected by catheter.

On December 20th her temperature and pulse rate were practically the same as on the day before, but her general condition had greatly improved. By December 23rd the abdominal tenderness, except in each iliac region, had almost disappeared, the lochial discharge had increased in quantity and had ceased to be offensive, and all signs pointed toward recovery. On December 25th she had a decided increase of temperature during the afternoon, but this yielded readily to a moderately large dose of quinine. Intrauterine suppositories, each containing 20 grains of iodoform, were employed daily, and the uterus and vagina were lightly packed with iodoform gauze from December 18th to 22nd.

The patient was allowed to sit up January 4th, and February 1st I examined her at my office. I found the uterus to be in good position and freely movable, but enlarged and somewhat sensitive to the touch. Both ovarian regions were sensitive, and the left ovary was enlarged. I could discover no evidence of pus foci in either broad ligament or elsewhere. Her bowels were constipated, but movements were unaccompanied by pain. The usual sequels of peritonitis appeared to be entirely absent.

In reviewing the line of treatment adopted in this case a number of pertinent queries are in order.

*First.*—Was there not danger of "drowning" the patient by introducing such great quantities of fluid into the abdominal cavity? I confess that I feared this might be the outcome, and had the kidneys not begun to functionate almost immediately after the irrigation was begun would have discontinued it at once.

*Second.*—Could not the same favorable result have been attained by intravenous infusion? So far as influencing the general systemic infection was concerned, I unhesitatingly reply in the affirmative, the opinion being based to some extent on recent reports of *lavage du sang* in streptococcic infection

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with a solution of formalin. In the cases reported, however, I believe that the favorable outcome was due to dilution of the poison in the blood current, and not to any germicidal influence exerted by the contained drug. The use of normal salt solution, I feel sure, would have been attended by as good results.

With regard to the attendant peritonitis, it undoubtedly was the local action of the saline which cut short the inflammatory process and which apparently prevented adhesion formation. I am able to explain this action only on the theory that, as streptococcic infection having the uterus as a starting point spreads to surrounding structures especially through the medium of the lymphatics, and as saline solution in the peritoneal cavity, as elsewhere, is primarily absorbed by the lymphatic system before entering the blood current, the consequent attenuation of the toxins almost at the point of origin would necessarily follow. Then again, while the primary effect on the blood vessels of hot water, that is, of water at a temperature ranging from 107 F. to 120 F., is to cause dilatation, and consequent engorgement, through the governing nerve mechanism, the secondary effect is that of contraction and cessation of congestion. As congestion is a natural concomitant of irritation, or inflammation, the effect produced by its disappearance is obvious. While this explanation appears plausible, I am compelled to ignore the fact that the peritonitic inflammation in this case was of streptococcic origin, and consequently of a type which would be the least likely to yield to any form of treatment.

As regards the nonformation of adhesions, it is natural to suppose that, the inflammation of the peritoneum being held in abeyance and the surfaces being separated by the fluid, no opportunity would be afforded for such adhesions to occur.

*Third.*—Was there not danger of over-stimulating the kidneys? This factor was before me during all the time the treatment was being carried out. The conditions under which the infusions were given made it impracticable to measure the quantity of fluid administered, and I have no means of knowing even the approximate amount absorbed. The urine collected was carefully measured at frequent intervals, and it was evident that the flow from the kidneys was almost constant from the beginning. It also occurred to me that such long exposure of the intestines to the action of water at a temperature of 110 F. might have a deleterious effect, but such did not prove to be the case.

It is to be regretted that bacteriologic examinations of the blood were not made at intervals subsequent to the one made after the venesection. Two specimens were obtained for this purpose, but, owing to an error, were lost.



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I am inclined to think that the satisfactory outcome was in part due to the character of the fluid employed. Dr. Harvey Cushing has called attention to the fact that a solution containing 0.6 per cent. of sodium chlorid, that commonly employed, should not be regarded as a normal physiologic salt solution. He says:

As a matter of fact, this is a most misleading designation, if we mean to imply by the term a fluid which is isotonic with the body fluids, and thus one that may be used with impunity in large amounts to replace directly in the circulatory system the loss of normal blood serum. A 0.6 per cent. salt solution is, in the first place, sufficiently hypisotonic to take the corpuscles perceptibly if used in sufficient quantity and, furthermore, the recent observations of Loeb and his pupils have demonstrated the actual toxicity toward cellular activities of the pure sodium chlorid solution, that is to say, when uncombined with other salts. . . . Sidney Ringer, years ago, through an accidental observation, discovered the fact that minute doses of calcium and of potassium salts, when used in combination with the usual percentage of the sodium salt, made a solution possessing a much more beneficial effect in conserving the activity of an isolated heart than the sodium solution when used alone. Thus, for the first time, was pointed out the antagonizing action of small amounts of calcium and potassium toward the toxicity possessed by the single sodium ion, and thereby was given the first indication of the necessity of combining salines in order to obtain a more perfect infusion solution. . . .

There can be no doubt that the pure sodium chlorid solution alone may, in certain ways, be injurious from its toxic effects; that, furthermore, a solution of the single salt, as weak as the 0.6 per cent. commonly employed, has a hemolytic effect on the red corpuscles. The desirability, therefore, of administering a fluid which shall be as nearly as possible isotonic with the blood—that is, shall have a molecular concentration corresponding to that of the liquor sanguinis—is evident.—*Jour. A. M. A.*

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# RUBBER TISSUE AS A DRESSING.

By G. TUCKER SMITH, M.D., Surgeon, U.S.N.

In treating any lesion of the skin in which an ointment is indicated as a dressing, it is of prime importance that the parts should, first, be thoroughly protected from infection from without; second, the ointment used should be kept in constant touch with the parts; third, the dressings, when changed, should come away without sticking and without damaging the new-formed and delicate epithelium, and fourth, that the dressing should be kept on as long as possible. All these requirements are admirably filled by rubber tissue. The parts having been cleansed with warm sterile water and green soap, should then be dried. The ointment is next spread on and covered over smoothly with sterile rubber tissue. Sterile lint is next applied and the whole secured with gauze bandage. Several cases are cited to illustrate its benefits:

F. J. McA., warrant machinist, U.S.N., aged thirty-three years, native of Brooklyn, N.Y., was, on November 24, 1902, while at work repairing a steam launch, severely scalded by escaping steam on both feet and wrists. The pain was severe, but was relieved by wet picric acid dressings and a hypodermic injection of morphine sulphate, one-quarter grain. The next morning it was found, on removing the dressings, that large blisters had formed. These were punctured, and the serum evacuated with aseptic precautions. A 10 per cent. boric ointment was then applied to the affected parts, and over this rubber tissue, lint, and a bandage. The dressings were changed from time to time without adhering to the skin or causing pain. By December 3rd he was well, the old skin having been entirely replaced by the new without infection.

Mrs. F. B., a young married woman, came under my charge last summer. She was suffering with a severe case of psoriasis. The disease had existed for almost two years, and had been very rebellious to the usual treatment of chrysarobin and collodion, locally, with arsenic internally. The eruption was confluent and covered the arms, forearms, the lower part of the body, the lower extremities, and the scalp. A 10 per cent. ointment of chrysarobin was applied to the arms and forearms with the rubber tissue daily. The improvement was prompt and gratifying. She had made for the body a jacket lined with the tissue. She moved to another locality early in October, but kept up the treatment faithfully. I heard from her from time to time that the eruption was gradually but steadily disappearing, and in January she wrote me that it had entirely gone, with the exception of a few small spots.

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B. S., an infant, aged eight months, was recently treated by me for acute eczema of the scalp. The little fellow was suffering greatly from the itching and consequent loss of sleep. Rubber tissue was sewed into a tight-fitting hood of light cotton material. Zinc ointment (℥ss-℥j) was applied, and the hood tied on closely and kept on day and night. The scalp was cleaned daily with sweet oil and the ointment and hood re-applied. The relief was evident, and in five days the eruption had disappeared.

In conclusion, I would state that doubtless this method has been used by others. As far as I am concerned it is original. I do not believe, however, that its advantages are generally known, and hence deem it worthy of report.—*The American Jour. of Medical Sciences.*

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## Cancer of the Uterus.

Pozzi (*La Gynécologie*) concludes his paper read before the International Medical Congress with the following deductions: 1. The surgical treatment of uterine cancer rarely insures relief extending beyond two years. 2. Hysterectomy is not justifiable if the uterus is fixed by indurations in the surrounding tissues. 3. The importance of infection of the lymph nodes has been exaggerated, since recurrence usually takes place in the cicatrix; hence extirpation of the glands, even when it is supposed to be complete, seems to have little influence on the return of the disease. 4. Abdominal hysterectomy is a more serious operation than vaginal, on account of the greater risks of infection, and should be reserved for special cases in which the vagina is narrow, the uterine wall softened, or the cul-de-sac extensively involved; also when the uterus is unusually large or complications are present—fibroids, pregnancy, pyometra, or pyosalpinx. In a few instances the abdominal route may be preferable, in order to dissect out the uterus from the diseased tissues. 5. Vaginal hysterectomy is accordingly preferable on account of the smaller risk, the ease with which it may be performed in the early stage of the disease, and the fact that even a palliative operation is preferable to a "pseudocurative" one in which the chances of an immediately fatal result are so great. —*American Jour. of the Medical Sciences.*

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# Progress of Medical Science.

## MEDICINE.

IN CHARGE OF W. H. B. AIKINS, T. M. McMAHON, H. J. HAMILTON, AND INGERSOLL OLMSTED.

### Scarlatiniform Erythema in Tuberculosis.

Claude (*Revue de la Tuberculose*), records an interesting case in which a virulent tuberculous infection was ushered in by a diffuse scarlatiniform erythema of the skin. The patient was a young woman who came under observation on July 28. After having suffered from general malaise, loss of appetite, and muscular pains for a period of seven or eight days, the patient developed an erythematous rash two days before she entered the hospital. It appeared first on the fore-arms, chest, and thighs, and was then patchy. The day after its appearance the patient had a high fever. After admission to the hospital the erythema became general and was of a scarlatiniform type. In five days desquamation began and the rash and desquamation lasted altogether about fifteen days. There was no soreness of the throat, nor any features of the tongue suggesting scarlet fever. The temperature gradually fell to normal by August 11, then it again steadily rose to 40.8° C. before death.

Inquiry showed a family history of tuberculosis. On the day of admission the examination of the lungs was negative. With the disappearance of the rash and the subsidence of the temperature there was not a correspondent improvement in the patient's condition. She gradually emaciated and profuse sweats appeared. Examination of the lungs on August 6 was still negative, but on August 13 signs of slight dulness, with moist and dry râles, were made out at both apices of the lungs, particularly on the right side. From this date on she failed rapidly and died in coma on August 25.

The autopsy showed an acute miliary tuberculosis involving the lungs, liver and spleen, bacilli being demonstrated in the tubercles. There were no old foci of caseous tuberculosis found anywhere in the body.

Claude believes that the erythema was a manifestation of an intense intoxication produced by the poisons derived from the tubercle bacilli. He has been unable to find any similar cases in the literature, but says that the scarlatiniform erythema is analogous to that occasionally observed in anginas, diphtheria, and intestinal infections. The writer remarks that not infrequently tuberculin injections are followed by a similar scarlatini-

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form rash. He comments on the early appearance of the rash, long before any physical signs were present, and regards the eruption as an expression of the virulence of the infection. Owing to its early onset, he designates the eruption as a "pre-tuberculous scarlatiniform erythema."—*American Jour. of the Medical Sciences.*

### The Passage of Tubercle Bacilli into the Lymphatic and Thoracic Duct after Ingestion.

Nicolas and Descas (*Cent. f. Bakt. u. Parasit*). Large numbers of tubercle bacilli were suspended in a fatty broth and fed to dogs. In a certain number of cases, after three hours, tubercle bacilli were present in the thoracic duct in such great numbers that they could be demonstrated in stained smears, and by inoculating the chyle into animals tuberculosis could be produced. The authors point out the importance of these results, although somewhat limited, as an explanation for the development of generalized tuberculosis arising by way of the alimentary passages.—*American Jour. of the Medical Sciences.*

### The Early Diagnosis of Jaundice.

Hamel (*Deutsche Med. Woch.*) The importance of the early recognition of jaundice—the cardinal symptom of diseases of the liver and gall bladder and of hæmocytolysis—cannot be over-estimated. But in sallow individuals slight degrees may easily be overlooked. The recognition of bilirubin in the urine is not of much assistance. For this pigment usually does not appear in the renal excretion until after the skin is obviously jaundiced. The only and rare exception is when sudden obstruction of the bile ducts occurs. But bilirubin is present in the blood and gives it a yellow colour before the skin and urine are discoloured. The bile reaches the blood directly from the lymphatics. All jaundiced organs, whether skin or internal viscera, owe their yellow colour to the yellow blood serum which circulates through them. This also applies to "hæmatogenous" jaundice. In many cases, for instance during the passage of a biliary calculus, the amount of bile absorbed gives a decided reaction in the blood, though it may not suffice to produce cutaneous or conjunctival jaundice. Examination of the blood is also useful in chronic jaundice. It shows whether the process is still active or whether a jaundiced tint is merely the result of the deposit of bile pigments, which may persist in the skin after the blood becomes normal. The writer has detected bilirubin in the blood serum in three cases in which cutaneous jaundice was absent.

Blood serum in a thin layer is normally completely colourless,

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or only slightly opaque. The technique of the method consists in puncturing the lobe of the ear, and allowing 15 to 20 drops of blood to flow into a capillary glass tube 1½ mm. thick and 4 in. long, which after being hermetically sealed with wax is placed upright with the column of blood below. In a few hours the clear serum has separated from the coagulum which remains at the bottom, and any discolouration is readily detected.—*Medical Review.*

### Clinical Observations in Arrhythmia.

F. Lommel (*Deutsches Archiv für klin. Med.*, Bd. lxxii) studied two forms of pulse arrhythmia, those caused by presystolic contraction and those due to the respiratory phases. In the first form the occurrence of occasional double beats in a cycle he finds in three conditions—in increased blood-pressure, diseases of the heart muscle, and nervous disturbances; in one case it seemed due to the greater internal pressure, and in the two others the abnormal irritability of the heart seemed to inhibit the precontraction. By the exact measuring of the pulse wave which follows on the presystolic contraction and the contraction of the auricle on the cardiogram, Lommel concludes that the increased blood-pressure in the ventricle and in other cases in the auricle produces the abnormal irritability. The arrhythmic disturbances of the heart (quickened by inspiration and slowed by expiration) are only exaggerated physiologic fluctuations occurring in convalescence, cardiac neuroses, and central nervous disturbances, and very seldom in organic diseases.—*Medical Age.*

### The Pathology and Therapy of Asthma.

SIHE (*Wiener Klinische Wochenschrift*) presents an exhaustive consideration of asthma, in which he maintains that it is a neurosis of the respiratory and circulatory tracts. Four factors stand out pre-eminently in this connection: (1) Hypertonia of the unstriated muscle fibers of the respiratory tubes; (2) hypotonia of the circulatory system; (3) bronchial secretion brought about through nervous influences; and (4) hyperemia of the mucous membrane of the entire respiratory tract. These four factors can be stimulated through three sources, viz: the peripheral nervous system, irritants circulating in the blood, and through the cerebrum. The author speaks therefore, of a peripheral, a hematogenic, and a cerebral asthma.—*Interstate Med. Jour.*

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## OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

### Syphilitic Necrosis of the Nasal Cavity, Accompanied with Total Blindness.

In the *Philadelphia Medical Journal* C. A. Todd reports a case of Syphilitic Necrosis of the Nasal Cavity, accompanied with total blindness.

The case here described of syphilitic disease of the nasal cavity is of interest outside of rhinology because of the ophthalmic complication.

The patient was sent to the clinic by Dr. Wilson, of the Eye Department, for Nasal Treatment. Almost complete destruction of the nasal septum was found, and, after proper cleansing of the parts, dead bone was found. Four pieces were removed on that occasion, and other pieces afterwards. All these pieces were removed without difficulty, and, after several visits, the cavity assumed a more healthy appearance.

By posterior rhinoscopy and palpation the vault of the pharynx was found to be intact; also, it was plainly seen that the anterior part of the body of the sphenoid was unhurt. The eye affection then could not be referred to extension of necrosis. The man assured me that he never had had any eye trouble before, nor headaches, but such as might be explained by a disordered stomach.

Through the kindness of Dr. Wilson, I am able to present the following data: three weeks previous to the patient's first visit, December 11th, he noticed the sight of the right eye grow dim, "as though something were coming over the eye." In six or seven days the eye became completely blind. Meanwhile the left eye fell into the same condition, and by December 7th it also became completely blind. December 11th: no vision in either eye. During the last four days he had had at different times three distinct flashes of light. For some days he had had continued pain in the region of the right temple, "a jerking headache." He was at once put on potassium iodide and the protiodide of mercury. December 16th.—Is now taking 20 grains of potassium iodide three times daily and $\frac{1}{8}$ grain of the protiodide twice. Headache was much better by the 15th, and is now gone. He had no more flashes of light. Thinks he catches some glimpses of light. Appetite has been good all along. December 18th.—With left eye distinguishes between light and shade. December 20th.—With left eye counts fingers held against the light. He can get about the house alone. December 21st.—Sight of left eye improving; with the right eye he can distinguish between light and shade. December

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23rd.—Came to clinic alone. December 26th.—Reads large print with left eye. January 2nd, 1902.—Reads large type readily with left eye; with right cannot make out the letters, but sees large objects. Has been taking the potassium iodide up to ℥iss daily, with protiodide. The mucous membrane of the nose is well healed; no ulcerations, no fetor. He continues the alkaline, antiseptic wash and vaseline. April 14th.—Returns from a visit to the country. Looks very well. Eyes same as on January 2nd. He dropped his medicine soon after January 2nd on account of cost, and has taken none since. Has kept up the nasal treatment only. June 5th.—Condition of eyes and nose the same as at last visit. At the onset of the treatment Dr. Wilson found some atrophy of the discs, but no other intra ocular lesion, with marked diminution of the field of vision and power of central vision. These conditions remain the same. The right disc exhibits no material difference from the left. There was at no time any involvement of other cranial nerves beyond what the headache in the right temporal region might indicate.

**Causes of Blindness in Kentucky, as Seen in the Kentucky Institution for the Education of the Blind.**

W. O. Bailey (*The American Practitioner and News*) has a study of the Causes of Blindness in Kentucky, as seen in the Kentucky Institution for the Education of the Blind. In all 228 cases were examined, of which 189 were white and 39 colored.

We find that purulent ophthalmia is responsible for a greater number of these cases than any other one disease; sixty cases, made up of fifty-three white and seven colored, or 26.3 per cent. of the total, are directly referable to this disease as a cause of blindness, and about 90 per cent. of these were due to a purulent conjunctivitis known as ophthalmia neonatorum contracted during parturition, and which we all know can almost invariably be prevented if treated by the Credé method of instilling a solution of nitrate of silver into the eyes immediately after birth. We found in these cases either atrophy of the eyeball or large corneal opacities, some accompanied by anterior synechia or staphyloma.

Trachoma or granular lids and its sequelæ come next in frequency with thirty-three cases, all white, or 14.5 per cent. of the total number examined. The local conditions found were corneal opacities with pannus, or atrophy of the eyeball following perforation of the corneal ulceration caused by the trachoma. Some showed the inturning of the lids, or trichiasis, due to contraction or shrinkage of the scar tissue on the under surface of the lids. Please notice that all of these cases were

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found in the white children; very few cases have ever been found in the colored race, and those found were in the light mulattoes.

Phlyctenular keratitis or eczema corneæ is the cause of twenty-nine cases, sixteen white and thirteen colored, or 12.7 per cent. This is the scrofulous or strumous disease of the eye, and this will, therefore, account for the large proportion of the colored cases due to this disease, for we all know, being poorly fed and nourished, that he is more prone to this variety of eye trouble than any other during youth.

TABULATED REPORT OF CASES.

| | White. | Colored. | Total. | Per Cent. |
|---|---|---|---|---|
| Purulent ophthalmia | 53 | 7 | 60 | 26.3 |
| Trachoma | 33 | .. | 33 | 14.5 |
| Phlyctenular keratitis | 16 | 13 | 29 | 12.7 |
| Congenital and lamellar cataract | 20 | 4 | 24 | 10.5 |
| Irido-cyclitis | 14 | 5 | 19 | 8.3 |
| Atrophy optic nerve | 13 | 4 | 17 | 7.5 |
| Traumatism and sympathetic ophthalmia | 12 | 3 | 15 | 6.6 |
| Congenital syphilis | 6 | .. | 6 | 2.6 |
| Retinitis pigmentosa | 3 | 1 | 4 | |
| Albinismus | 4 | .. | 4 | |
| Congenital central choroiditis | 4 | .. | 4 | |
| Congenital glaucoma with atrophy | 3 | .. | 3 | |
| Hydrophthalmos | 2 | .. | 2 | |
| Nystagmus | 1 | 1 | 2 | |
| Amblyopia with high myopia | 2 | .. | 2 | |
| Amblyopia with hypermetropia | 1 | .. | 1 | |
| Traumatic cataract (one eye) | 1 | .. | 1 | |
| Smallpox | .. | 1 | 1 | |
| Anophthalmos | 1 | .. | 1 | |
| | 189 | 39 | 228 | |

## A New Method of Extracting Foreign Bodies from the Ear.

There is no more delicate and even difficult task, so states the *Medical Press*, than the extraction of a foreign body from external auditory canal. Irrigation often fails to bring it away, and in certain cases adds to the difficulty by causing the object, a pea for instance, to swell and become more firmly impacted. The employment of instruments is very painful, and requires considerable dexterity, besides supposing an armamentarium specially designed for the purpose, which few general practitioners possess. The recommendation is made of a piece of soft rubber tube, the length of a cigarette, and of the proper size, to be introduced into the ear. The end of the tube is dipped in paraffin and pushed into the canal until it comes in contact with the foreign body, whereon the operator, applying his mouth to the free end, aspirates forcibly, at the same time throwing back his head. Except in cases of angular bodies of irregular contour this method is usually attended by success, the body coming away with the tube.—*Journal American Medical Association.* J. T. D.

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# OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD, K. McILWRAITH, AND HELEN MACMURCHY.

## Puerperal Insanity.

At a meeting of the London Obstetrical Society, held January 7th, 1903, Dr. Robert Jones opened a discussion on the above subject. His paper was based on a personal experience of 259 cases of puerperal insanity, divided into 120 cases during the actual puerperal period, 83 during lactation, and 56 during pregnancy. Insanity was stated to occur once in every 700 confinements. Insanity was stated to be of a characteristic form after confinement, amounting to an almost nosological entity; but this was not the case during pregnancy nor during lactation, there being no definite type of insanity occurring in connection with these two stages. The divisions were, however, more convenient than typical. The following propositions were advanced by the author: (1) The insanity of pregnancy is more common in first confinements among single women, the disappointment, shame and disgrace of illegitimacy being an important factor in the mental break down. (2) During pregnancy the mental condition is more often acute melancholia than acute mania, and suicidal symptoms, which occurred in 41 per cent., have to be carefully guarded against. (3) The insanity of pregnancy is divided into that occurring during the earlier months and that occurring during the later months, and in these the nearer the insanity in point of time to the confinement the more acute are the mental symptoms. Insanity is not more frequent when the sex of the child is male. (4) The insanity of the puerperium comes on after the first confinement in 33 per cent. of the cases, and supervenes suddenly rather than gradually. (5) The cases which occur during lactation present characters of marked general physical exhaustion, and mentally are more often of the depressed than the maniacal form. Lactation insanity becomes chronic oftener than the insanity of the other periods. There is a tendency to low forms of inflammation, thrombosis, gangrene, and phthisis during the insanity of lactation. Both suicidal and infanticidal promptings are more common in lactational than puerperal cases, that is in cases where insanity commenced more than six weeks after confinement. (6) The early symptoms of threatening insanity are loss of sleep and headache, and these should be a forewarning of mental break down. The busy delirium of hallucinatory character, ending in acute, restless, purposeless mania with religious and erotic delusions, is characteristic of

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this variety. (The writer suggested a close analogy between the emotions of love and religion, and agreed with Simpson that the organ diseased gave a type to the insanity, and that in women suffering from affections of the generative organs the delusions were more likely to be connected with sexual matters.) (7) Etiology: Heredity is more marked and in the direct maternal line in puerperal and lactational insanity, and is equally paternal and maternal in the insanity of pregnancy. A previous record of hysteria is frequent in puerperal insanity. (8) The pathology is that of heredity and stress. Is the stress due to a toxin? (9) As regards prognosis, cases of insanity during early pregnancy improve towards the end of pregnancy, whereas those of late pregnancy become worse at the puerperium. Puerperal insanity is markedly recoverable. Improvement is rapid, being often complete in three months, but generally takes four to five months. (10) Treatment: All cases presenting headache and sleeplessness must have absolute quiet and rest, and sleep must be procured. Home treatment in all cases if possible. Guard against unusual and sudden impulses of suicide and infanticide. The presence of the husband aggravates the symptoms. There is much necessity for a liberal and stimulating dietary. Change is necessary in puerperal insanity when cases tend to become stuperose. Menstruation is a sign of mental improvement. Purgatives and iron are well borne.—*Br. Med. J.*, January 24, 1903. An interesting discussion followed in which several of the members remarked that refusal to take food was one of the most characteristic symptoms.

K. C. M.

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# Editorials.

## APPETITE AND DIGESTION.

Many busy men thoroughly enjoy what is known as a good dinner, which is a very scientific sort of thing, although it has reached its present stage of perfection through a process of evolution extending over something like 6,000 of study and practice which have been largely empirical in character. We are learning much during the last few years on the physiological aspects of a good dinner. Dr. Pawlow has thrown much interesting light on the connection between appetite and digestion, as we learn from the *Literary Digest* which gets its information from the hospital.

We learn from his investigations that we do not as a rule eat because we are really hungry. We sit down to our dinner and depend on the cook to create most of the appetite and give the proper stimulus to the digestion. An alkaline bitter to start with helps both. Then come foods which help the good work done by the bitters, such as the extractives of meat which exist in the soups. We thus get fairly well through our preliminary canter as far as the simple food is concerned. But we have other things to consider. We must eat with interest and enjoyment, having left behind us all our cares and troubles. The psychological aspect is most important. The good appetite soon created, the happy surroundings, the initial light foods excite the gastric and intestinal glands. We go on from course to course, never growing weary in well doing, and really put away quite a vast amount of food in a couple of hours. If we are moderate in our post-prandial smoking, etc., we go to our beds happy and contented—perhaps slightly philosophical—and awake the next morning without a headache. From a professional point of view not the least interesting feature is the fact that thanks to our *chef* we have been acting on strictly scientific physiological lines. As to a poor dinner, however, perhaps the less said the better!

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## THE ADDITION OF CHEMICAL PRESERVATIVES TO FOOD.

The fact that certain antiseptics are added in considerable quantities to our foods is perhaps not properly appreciated by the medical profession. Dr. A. E. Porter, of Leeds, England, tells us that the quantity of drugs more or less potent which may be consumed on account of such adulteration is larger than most of us suspect.

"Out of 4,251 samples of food and drink obtained from London and the provinces which were recently examined at the Government Laboratory, nearly 40 per cent. were found to contain either boron compounds, salicylic acid, formic aldehyde, or sulphites. Whilst these are the commonest preservatives in use, benzoic acid, hydrofluoric acid, alum, chloral hydrate, $\beta$-naphthol, sulphonate of soda, and alcohol are also employed.

"One or other of these substances has been found in milk, cream, butter, margarine, bacon, ham, fresh meat, poultry, game, sausages, pork pies, potted meat, meat jellies and extracts, fresh fish, herrings, shrimps, oysters, potted fish, fresh and preserved fruit, jams, vinegar, pickles, lime and lemon juice, syrups, ginger beer, ginger ale, lemonade, British wines, cider, beer, port, sherry and brandy."

One of the safest, and at the same time most widely used preservatives is boric acid. It is employed chiefly for the preservation of dairy products, and fish and meat foods. Experiments indicate that generally it has no evil effects, but there are exceptions. Those who have conducted the experiments think that milk containing boric acid is injurious to young children, and also to adults suffering from acute or chronic nephritis, and also those suffering from digestive disturbances, such as gastric ulcer or gastro-enteritis. It is also considered by some that boric acid tends to produce muscular contraction, and is therefore an undesirable addition to the food of a pregnant woman.

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We regret that a rather misleading item regarding the use of antistrepto-coccus serum in scarlet fever, appeared in our last issue. We understand that the trial of the Stearns Hubbert Process Serum is still being carried on, but the base for the work has been changed on account of lack of cases in Montreal.

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## THE ONTARIO MEDICAL ASSOCIATION.

The twenty-third annual meeting of the Ontario Medical Association will be held, June 16th to 18th, inclusive, under the Presidency of Dr. J. C. Mitchell, formerly of Enniskillen, now of Toronto. For the first time in the history of the Association there will be a three days' meeting. The two important committees have their work well in hand. The Committee on Arrangements, under the chairmanship of Dr. Bruce Riordan, have, we understand, nearly completed their plans. The committee on Papers and Business, under the chairmanship of Dr. W. P. Caven, have nearly completed their programme. We are pleased to know that our friend, Dr. Thos. Cullen, of Baltimore, has promised to attend and contribute a paper. We are also glad to announce that Dr. Musser, of Philadelphia, will read a paper. During the meeting there will be a discussion on arteriosclerosis. Members who are willing to contribute papers are requested to communicate with the General Secretary, Dr. Harold Parsons, Bloor Street W., Toronto.

## THE RICHARDSON TESTIMONIAL.

We understand that Dr. Thomas Cullen, of Baltimore, was the first to suggest the advisability of honoring our dear friend, Dr. Richardson, by tendering him a banquet and presenting his portrait to the University of Toronto. Dr. John Amyot started the movement in Toronto, and has been exceedingly active as the Secretary-Treasurer in completing all the details. He has been well supported by the committee having charge of the matter. Many interesting letters have been received by Dr. Richardson's *old boys* in all parts of the world. We cull a few extracts as follows:

Professor Wm. Osler, of Baltimore, says: "I am very glad indeed to hear of the Richardson testimonial, to which I am only too pleased to subscribe. Let me know how much you want. I was very closely associated with Dr. Richardson during my first two years of student life, and became very much attached to him, and it would be a very great pleasure to do anything I possibly could for such a worthy object."

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Professor D. W. Montgomery, of San Francisco, Cal., says: "I owe quite a debt of gratitude to Dr. Richardson as a most excellent teacher. Lesslie Sweetnam and I were his prosectors, and he took infinite pains with us. I also shall never forget his clinics."

Dr. M. S. Langs, of Boulder, Col., says; "Please give the doctor my regards when you see him, although he has probably forgotten me entirely, as I have not seen him since some time in 1864."

Dr. Teller, of Arkansas City, Kan., says: "Enclosed you will find money order. Hoping it may help in giving as much pleasure as it has given me in sending it."

Dr. Wm. Burt, of Paris, Ont., says: "I am very much pleased with what is being done for Dr. Richardson."

Dr. James F. Bell, of Portland, Oregon, says: "It gives me great pleasure to contribute this small amount to this cause, for I entertain only the most pleasant recollections of Dr. Richardson as a teacher, physician and man; and my great regret is, that I cannot be present at your dinner."

Dr. C. Sheppard, of Ontario, Cal., says: "It affords me great pleasure to join in the testimonial to our old and esteemed teacher, Dr. Richardson, whose kindly interest and friendly advice I always remember with great satisfaction."

Dr. Octavius Wild, of Vancouver, B.C., says: "I enclose herewith my subscription towards the testimonial portrait of our greatly esteemed teacher, Dr. Richardson. Would that I could join his hosts of students and friends at the dinner to be given in his honor after Easter, but distance prohibits."

Dr. Charles T. Noecker, of Waterloo, Ont., says: "I am heartily in accord with the objects of the movement, for I think the honors should be showered on Dr. Richardson while he is with us in body and spirit, and not withheld, as is too frequently done, until the spirit world has opened and closed its gates. Dr. Richardson taught us anatomy it is true, and in a very thorough manner, but his lessons were not confined to the subjects within the covers of anatomy text-books. Well do I recollect his presence before the class, coat removed, arms bare, in short, enthusiasm personified. He was the champion of students' rights, and well does he merit the esteem in which he is universally held. I am sure that the graduates of the Toronto school, without exception, have largely benefitted by his instruction and example."

Dr. Jas. S. Freeborne, of Magnetawan, Ont., says: "I trust and believe you will meet with a hearty response. None deserves it better than Dr. Richardson."

Dr. Samuel McKibbin, of Amethyst, Colorado, says: "I am pleased that the friendship for Dr. Richardson, and apprecia-

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tion of his work are finding tangible expression. It is a pleasure to me to have a part in the testimonial, as I have always been a sincere admirer of the doctor—of the man rather. His manly, straightforward, forceful qualities always made him a hero, as well as professor, in the affections of the students. I hope he may live many years yet, in which to enjoy the peaceful reflections over a life-work well done."

Dr. A. J. Campbell, of Gravenhurst, Ont., says: "I am heartily with any effort to do lasting honor to our mutual friend, the venerable Dr. Richardson."

Dr. F. D. Kent, of Thornbury, Ont., says: "No one would be more delighted than myself to attend the dinner to do honor to one who in my time was undoubtedly 'the friend and champion of the boys.'"

Dr. W. S. Black, of Oakville, Ont., says: "I desire to subscribe to the James H. Richardson Fund, and I thank you for giving me this opportunity of lending a helping hand to such a deserving and praiseworthy object."

Dr. L. H. Campbell, of Bradford, Ont., says: "He is worthy of every honor we can do him."

Dr. J. W. Burgess, of Montreal, Que., says: "As an old pupil of a man to whom I owe a very, very great deal of gratitude, I gladly enclose my subscription toward the portrait. Kindly convey my good wishes to Dr. Richardson and the gathering."

Dr. N. D. Richards, of Warkworth, Ont., says: "I heartily agree with you that Dr. Richardson's services deserve recognition by his old students. There never was a man in the Toronto School of Medicine who had the love of the students as much as he had. I for one really loved him. If it is possible for me to be at the dinner I will let you know before the time. If not believe that I will be there in my thoughts."

Dr. F. J. Bell, of Southampton, Ont., says: "I will ever hold in grateful and pleasant remembrance the sympathy and interest in the Meds that 'Jimmie' ever manifested."

Dr. A. R. Robinson, of New York, says: "Would like very much to be present to grasp the hand of the *young man* and wish him a long life, etc. I remember Professor Richardson's face as if I had studied under him but yesterday."

Dr. James H. Duncan, of Chatham, Ont., says: "It would be difficult to express in too strong terms my appreciation of Dr. Ricardson as an eloquent, earnest and most effective teacher, and as a friend ever kind, with a fatherly kindness to me. I deeply regret that I shall not be able to join with his admirers at the proposed dinner, but in spirit I shall be with you; wishing Toronto University Medical Department's 'Grand old man' (for the doctor is certainly no longer young) every happiness, and joining in the deserved, yes, well-deserved, laudation of his



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many excellencies that will be so freely and eloquently spoken that night."

Dr. M. J. Kelly, of Brantford, Ont., says: "As an old pupil who never sat under a superior teacher of anatomy I would willingly have contributed something more valuable."

Dr. J. P. Vrooman, of Napanee, Ont., says: "I enclose post office order to apply to fund for purchasing painting of Dr. Richardson. The idea of doing so is an excellent one, and I am truly glad to have the opportunity to contribute as my respect and liking for the old man have only increased as years went by."

## The Banquet.

The banquet held at McConkey's restaurant, April 15th, was a most successful and enjoyable affair. Among those present, in addition to Dr. Richardson, were Professor Loudon, President of the University of Toronto, Chief Justice Moss, Vice-Chancellor, Professor Reeve, Dean of the Medical Faculty, Professor Ramsay Wright, Dean of University College, Mr. A. Dixon Patterson, the artist, Professor Cameron, who acted as Chairman, Messrs. William and James R. Roaf, (nephews of Dr. Richardson), Mr. William Freeland, (son-in-law), Dr. Charles O'Reilly, Toronto General Hospital, Dr. Thomas Cullen of Baltimore, Drs. Ingersoll Olmsted of Hamilton, A. Taylor and James L. Turnbull of Goderich, Angus McKinnon of Guelph, Frank Drake of London, S. T. Rutherford of Listowel, E. E. Kitchen of St. George, Horace Bascom of Uxbridge, D. Hoig of Oshawa, H. F. MacKendrick of Galt, C. H. Britton and W. R. Walters of East York, Jas. Johnston of Bradford, Pa., Drs. Jos. Bascom, Geo. Peters, A. Primrose, R. D. Rudolf, J. Milton Cotton, Edmund E. King, Albert Macdonald, W. H. B. Aikins, Arthur Jukes Johnson, Geo. McDonagh, A. B. Macallum, Uzziel Ogden, Wilberforce Aikins, Cleland, Amyot, W. H. Ellis, W. A. Young, James F. W. Ross, Cuthbertson, Duncan, Oldright, Adam Wright, Alexander, Geoffrey Boyd, Price Brown, Herbert Bruce, Burnham, G. H. Carveth, John Caven, W. P. Caven, Graham Chambers, George Clemens, Alexander Davidson, Dwyer, J. T. Fotheringham, Goldie, Greig, Harrington, Chas. J. Hastings, S. M. Hay, Wm. Heggie, Lehmann, W. J. McCollum, McKibbon, McKeown, A. McPhedran, Machell, Nevitt, John Noble, J. Orlando Orr, Churchill Patton, Peaker, Crawford Scadding, Silverthorne, G. B. Smith, Wallace Smuck, F. N. G. Starr, Clarence Starr, Thistle, J. D. Thorburn, Webster, R. J. Wilson, Thomas Wylie, J. E. Elliott, A. Webb, J. L. Smith, John Ferguson, D. McGillivray.

A pleasing incident occurred during the last course of the dinner when Mrs. Richardson, with her daughter, sister and

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niece entered the gallery. They were seen by a few at the head table, and a slight clapping of hands commenced. All heads were at once turned towards the applause, and then in the opposite direction towards the gallery. The whole assembly then rose as one man and cheered and waved their handkerchiefs, then followed a song, more cheering and more waving. The last to wave a loving signal across the banquet hall was the Grand Old Man himself—the devoted husband to the devoted wife.

The following quotation appeared on the handsome menu card in connection with the toast to the guest:

"A man with whom we have often fished and conversed, whose experience, learning, wit, and cheerfulness made his company to be esteemed one of the delights of mankind; this man was also a most dear lover and a frequent practiser of the art of angling, of which he would say: 'Twas an employment for his idle time which was not idly spent, a rest to his mind, a cheerer of his spirits, a divertion of sadness, a calmer of unquiet thoughts, a moderator of passions, a procurer of contentedness, and that it begat habits of peace in those that profest and practic'd it.'"

After honoring the toast to the King Dr. G. S. Cleland, unveiled the portrait, and formally presented it to the University. In doing so he referred briefly but in warm terms to the distinguished services rendered to the University in various ways by Dr. Richardson while acting as professor of anatomy. Chief Justice Moss, the Vice-Chancellor, in accepting the portrait also made some kind and complimentary references to the Doctor's great work as a teacher and a surgeon. He also paid a fervent tribute to his services as a Senator of the University at one important period. We understand that Dr. Cleland was the first to suggest that the graduates should present a portrait of Dr. Richardson to the University at the banquet. The portrait is from the brush of Mr. Dixon Patterson and is a striking likeness of Dr. Richardson as he appeareth now in his eightieth year.

After the presentation of the portrait Prof. W. H. Ellis, on behalf of the old pupils presented an illuminated address as follows:

*To James Henry Richardson, Esq., M.D. Tor., M.R.C.S.. Eng., Emeritus Professor of Anatomy in the University of Toronto.*

SIR,—We, your old students, have been desirous of expressing, in some suitable way, our respect for you as a teacher and our affection for you as a friend, a respect and affection which you inspired in us as undergraduates, and which the experience of later years has only served to increase.

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To fulfil this purpose we have thought that we could do no better than to present your portrait to the University with which, from its earliest years you have been so closely identified, whose cause you have so loyally defended, and whose reputation you have so signally advanced.

For nearly half a century you have labored in the cause of medical education with unwearied patience and with ungrudging devotion. We wish to assure you that your labor has not been in vain.

To the foundations laid by you, and by your colleagues of the Toronto School of Medicine, the University of Toronto owes, in no small measure, the success of her Medical Faculty, and we, your scholars, owe to you, our master, for sound teaching and kindly help, for high ideals and a worthy example a debt which we can never repay but which we are proud to acknowledge.

We feel, therefore, that the building which is about to become the home of the Medical Faculty of the University of Toronto, could have no fitter ornament to decorate its walls than the portrait of one who has so many claims as yourself upon the grateful remembrance of every graduate.

It is our great privilege in making this offering to have the opportunity of testifying at the same time our loyalty to our *Alma Mater* and our love for her distinguished son.

We beg to sign ourselves on behalf of the subscribers your grateful pupils and faithful friends:

(Signed) Joseph Bascom, Wm. Oldright, W. H. Ellis, A. H Wright, I. H. Cameron, Jas. F. W. Ross, H. Wilberforce Aikins, J. Milton Cotton, Edmund E. King, Jno. Caven, George A. Peters, G. S. Cleland, J. T. Duncan, Jno. M. Amyot.

Prof. I. H. Cameron, in proposing the toast of "Our Guest," expressed the wish that Dr. Richardson might long be spared to them. As his pupils, they had perhaps forgotten much of the anatomy he had taught them, but they had not forgotten the example he had given them—that would remain with them to the end of the chapter. He referred to the doctor's piscatorial prowess, and how as a young man he had won fame as an athlete, and in the noble art of self-defence. Although he had attained to fourscore years, he still excelled in athletic pursuits—he was still able to catch fish and play the roarin' game.

Dr. Richardson, who was most enthusiastically received, expressed heartfelt thanks for the reception, and gave a short review of his medical career. He also thanked his old pupils for having so pleasantly brightened his latter days. They

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had conferred a great honor upon him, and more than that had given him an assurance of their esteem. He then gave a few interesting particulars as to his student life and his work for a few years after graduating.

In 1841, after concluding his studies at Upper Canada College, he went to Rochester, where he studied under Dr. Rolph for two years. In 1843 he returned to Toronto and entered the Medical School as a student, having first to secure a special dispensation, as he did not belong to the Established Church. In 1843 the young student went to England, entering Guy's Hospital, where he obtained the diploma of M.R.C.S., being the first Canadian to win this honor. He was present at the first administration of ether in London. He was six months in Paris. He returned to Toronto in 1848, and entered upon the practice of medicine. In 1850 he was appointed lecturer in anatomy, as successor to the late Dr. Sullivan. When the new faculty of Toronto University was formed, he was appointed professor in anatomy, a position he resigned one year ago. He was for many years a member of the University Senate. He also bears the distinction of being the first student of Toronto University to take the medical degree. In the course of his remarks he related some incidents illustrating the progress of medicine during the last fifty years.

The entrance of Mrs. Richardson into the banquet hall brought back to the minds of many present recollections of a very happy event which happened, August 20th, 1900, when Dr. and Mrs. Richardson celebrated their golden wedding. After a family dinner party the dearly beloved couple received their friends from 4 to 10 p.m. in an informal way. At the close of the happy day Dr. Richardson remarked that he especially appreciated the fact that not only did the older members of the profession come to bid them God-speed, but that nearly all the younger physicians of the city also called on them. At that time we were very much pleased to be able to state that both Dr. and Mrs. Richardson were in the enjoyment of excellent health. We rejoice to-day to have the same happy tale to tell.

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# Personals.

Dr. Helen MacMurchy has removed to 133 East Bloor Street

Dr. Glen Macdougall has opened an office on Bathurst Street, Toronto.

Dr. King Smith has been promoted to the rank of Surgeon-Major of the 48th Highlanders.

Dr. J. Algernon Temple has removed to his new residence, 333 Bloor Street West.

Dr. George Porter, of Toronto, after a visit to the city of Mexico, returned March 24th.

Dr. Charles O'Reilly, after spending a few days in Detroit returned to Toronto, March 21st.

Dr. A. M. Hayes (Tor. '90) has been appointed Associate Coroner for the County of Lambton.

Dr. R. T. Noble will reside at 74 Gerrard Street East, when Dr. Silverthorne moves to College Street.

Dr. J. M. Elder has been appointed Assistant Professor of Surgery and Clinical Surgery, McGill University.

Dr. Wentworth Irving was married, March 14th, to Miss Maude Macleam, daughter of the late Dr. Macleam, Meaford.

Dr. Eli Thomas Eede, of Leamington, has been appointed an Associate Coroner for Essex County, in the place of Dr. J. T. Sutherland, deceased.

Dr. Duncan McEachern, for many years Dean of the Faculty of Comparative Medicine and Veterinary Science, McGill University, has resigned.

Dr. Lapthorn Smith, of Montreal, left New York for Europe, March 25th. He will attend the meeting of the International Medical Congress at Madrid, to be opened, April 23rd.

Dr. G. Silverthorne, of Toronto, has recovered from his recent attack of septicemia. He has purchased a house, 236 College Street, which he expects to occupy May 1st.

Dr. Trudeau, of Saranac, spent a portion of the winter in California on account of his wife, who was in delicate health. His son, Dr. Trudeau, jr., who was acting as temporary manager of the sanitarium at Saranac, received a despatch in the latter part of March summoning him to California to see his father who was seriously ill.

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Dr. Colin Campbell visited Toronto in March.

Dr. E. F. Smith has been appointed jail surgeon at Mattawa.

Dr. Sylvester, of Toronto, visited New York early in April.

Dr. George McDonagh enjoyed his visit to Jamaica very much. He went by way of Baltimore, and Dr. Thos. S. Callen sailed by same steamer for Jamaica. Dr. McDonagh returned to Toronto March 19th.

Mr. James Hutton, a medical student of Queen's University, Kingston, charged with attempted grave robbery at Lansdowne on the night of March 12th, was sentenced, March 27th, to imprisonment for two months in the common jail, Brockville.

Dr. D. Gibb Wishart has recovered from his attack of erysipelas, after having had two relapses. He and Dr. Harold Parsons, who has recovered from his second attack of septicemia, went to St. Catharines, April 4th, and spent a couple of weeks at the Welland.

Dr. P. H. Bryce, of Toronto, Secretary of the Provincial Board of Health of Ontario, read an address on "Some Scientific and Practical Aspects of Vaccination" before the Medical Society of the State of New York, at its ninety-seventh annual meeting.

The Municipal Council of St. John, N.B., recently honored Dr. Wm. Bayard, by tendering him a tribute of regard and personal esteem in the shape of a handsomely engrossed resolution on parchment, on the occasion of his retirement from the Board of Commissioners of the General Hospital, after a service of forty years.

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# Obituary.

## WILLIAM WARREN BALDWIN, M.B.

Dr. Baldwin (Tor. '90), died at Olive Island, Muskoka, March 23rd.

## JOHN G. GILES, M.D.

Dr. Giles (Queen's, '60) of Athens, died, March 12th, at the age of 69.

## ALEXANDER GRAHAM, M.D.

Dr. Alexander Graham (Victoria, 1869), of London, Ont., died March 26th.

## SAMUEL COWAN, M.B.

Dr. Samuel Cowan (Tor. '66), died, February 1st, at the Guelph General Hospital, aged 70.

## ROBERT MAXWELL COOPER, M.D.

Dr. R. M. Cooper (West. Univ. '89), of London, Ont., died suddenly, March 21st, at the age of 34.

## CHARLES McDONALD CAMERON, B.A., M.D.

Dr. Cameron (B.A., Victoria, and M.D., Univ. N.Y.), for many years a practitioner of Rochester, N.Y., but recently a resident of Cobourg, Ont., died, February 27th, aged 81.

## THEODORE GAILLARD THOMAS, M.D., LL.D.

Dr. T. G. Thomas, of New York, died suddenly of cardiac disease at Thomasville, Georgia, February 28th, aged 71. He was for many years the greatest gynecologist, and the greatest teacher of gynecology in the United States.

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## THOMAS McCORT, M.D.

Dr. Thomas McCort, of Thessalon, Algoma, died, January 13th, 1903, aged 47. He was graduated from Trinity University, 1878.

## PROFESSOR ENRICO BOTTINI.

Professor Enrico Bottini, the celebrated Italian Surgeon and Parliamentary Senator died, March 11th. He was best known in this country for the operation which bears his name.

## ANDREW HALLIDAY, M.B., C.M., D.P.H.

Dr. Halliday, of Halifax, died, March 10th, exactly one year after the death of Dr. Muir. We learn from the *Maritime Medical News* that, "with the prospect of employment in the Provincial Laboratory and in the Halifax Medical College, Dr. Halliday had spent a year recently at Glasgow University, giving careful study to subjects pertaining to public health." He was generally recognised as one of the ablest and most scientific young physicians that Nova Scotia has produced.

## D. GILBERT GORDON, B.A. (Tor.) M.D. (Trin.)

The last time the writer saw Gilbert Gordon he looked healthy and happy, and was driving with the Rev. Dr. Kerr, the captain of the Scotch Curling Brigade, to the Victoria rink for an afternoon match. A few days after we heard the sad news that he probably had tubercular peritonitis. A section was performed, March 2nd, and, although the diagnosis was found to be correct, hopes of his recovery were entertained by himself and his physician. Contrary to advice he went to Old Point Comfort, but soon grew worse, and was moved, March 10th, to Baltimore, where he was kindly cared for in Dr. Howard Kelly's private hospital until the morning of March 28th, when death put an end to his sufferings. The remains were brought to Toronto and buried on the afternoon of March 30th.

Dr. Gordon pursued his arts course in Toronto, and his medical course in Trinity, becoming M.D. in 1886. He went to Europe in 1887 for post-graduate work, spending the greater portion of his time in Edinburgh, where he took the double Edinburgh and Glasgow qualification. He commenced practice

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in Toronto in 1888, and was eminently successful as a practitioner, and as a teacher of medicine in Trinity Medical College. After working for some years in the department of anatomy in the latter institution, he was appointed Professor of Sanitary Science and Associate Professor of Clinical Medicine. He was a lover of sports—in his younger days one of the best football players that ever appeared on the University campus, an excellent curler, being a past president of the Victoria Curling Club, and a very enthusiastic bowler "on the green." He was a straightforward, honest, manly man, with a charming and lovable disposition, a family physician of the best type, an excellent practical teacher, very popular with his vast host of friends, and dearly beloved by his patients. He was 45 years of age.

## FRANK D. TURNBULL, M.B.

Among the recent graduates in medicine of the University of Toronto, there was none more highly respected than Dr. Frank Turnbull. After graduating he spent a year as resident assistant in the Toronto General Hospital, 1899-0. After practising nearly three years in Auburn, Huron County, he decided to go to Europe for post-graduate work. On his journey to Goderich in a canoe, March 19th, an accident in the rapids, causing his boat to upset. After a time he was found clinging to the canoe, and rescued in a dying condition. Life was extinct when the body was brought to land.

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# Correspondence.

*To the Editor of* CANADIAN PRACTITIONER AND REVIEW.

DEAR SIR,—At the last (fifty-third) meeting of the American Medical Association, held at Saratoga Springs, June 10-13, 1902, a joint resolution from the Sections of Cutaneous Medicine and Surgery and Hygiene and Sanitary Science was introduced in the House of Delegates as follows:

*Whereas*,—There is a burning necessity to check the spread of venereal diseases, and, assuming that the States cannot with impunity ignore the condition, it lies in the province of the medical profession to discuss and recommend to the respective State Legislatures and Municipalities means not regula-mentative, but social, economic, educative and sanitary in their character, to diminish the danger from venereal diseases.

"*Resolved*,—That the Section on Cutaneous Medicine and Surgery of the American Medical Association invite the section on Hygiene and Sanitary Science to co-operate with the Section on Cutaneous Medicine and Surgery in bringing about a propaganda in the different States, looking toward a proper recognition of the dangers from venereal diseases, and to arrange for a national meeting under the auspices of the American Medical Association for the prophylaxis of venereal diseases, similar to the International Confereuce for the Prophylaxis of Venereal Diseases, which meets again this year at Brussels, under the authority of the Belgian Government."

This was later submitted to the House of Delegates, which endorsed the action of Section and adopted the following:

"*Resolved*,—That a joint committee of six from the sections on Hygiene and Sanitary Science and Cutaneous Medicine and Surgery be appointed by the president to stimulate study in and uniform knowledge of the subject of the prophylaxis of venereal diseases and to present to the American Medical Association a plan for a national meeting, similar to the International Conference for the Prophylaxis of Venereal Diseases, which meets again this year in Brussels, under the auspices of the Government of Belgium."

The Committee on Prophylaxis of Venereal Disease consists of: Dr. Henry D. Halton, Chairman, Brattleboro, Vt.; Dr. Ludwig Weiss, Secretary, 77 East 91st Street, New York; Dr. George M. Kober, 1600 "T" Street, Washington, D.C.; Dr. W. H. Sanders, Montgomery, Ala.; Dr. L. Duncan Bulkley, 531 Madison Ave., New York City; Dr. Frank H. Montgomery, 100 State Street, Chicago, Ill.

The peculiar social, racial and political conditions of our

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country are so different from those on the continent that they necessitate an expression of solely American ideas on this mooted question, both from a socio-economic and sanitary point of view.

The Committee desires the support of the medical profession and the aid and powerful collaboration of the Medical Press of the country to help them in this work. It takes the liberty of soliciting expressions and views editorially and otherwise, and would be glad of personal correspondence from those supporting the movement and who will contribute by papers, etc., to make it a success in case the House of Delegates should favor the holding of such a Congress.

By giving this a place in your esteemed paper, the Committee feel that you will have aided materially in forwarding the work entrusted to them.

I remain with thanks,

Very truly yours,

LUDWIG WEISS, M.D.,

New York, March 4th, 1903. *Secretary of Committee.*

## MEDICAL ITEMS.

The University of Toronto Alumni Association of Montreal held their first annual dinner, March 12th. Among those present were Professors Hutton and Ramsay Wright, and Drs. Geo. Wilkins, John McCrae and A. S. Morphy.

Professor and Mrs. Goldwin Smith have contributed $2,000 towards the fund for the convocation hall, University of Toronto.

The *Journal of Tuberculosis*, a quarterly magazine devoted to the prevention and treatment of tuberculosis, edited by Karl Von Ruck and Silvis Von Ruck, and published by A. H. McQuilken, Ashville, N.C., has been greatly increased in size and improved in appearance. It is in all respects an admirable medical journal.

American Urological Association meets first Wednesday of each month, except July, August and September.

Annual meetings: The last day of the American Medical Association's meeting and the day following.

This year's meeting: New Orleans, May 8th and 9th.

President: Ramon Guiteras, M.D.

Secretary: Ferd. C. Valentine, M.D., 31 West 61st St., New York.

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# Book Reviews.

**Progressive Medicine.** Fifth annual series. Volume I, March, 1903. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 450 pages, illustrated. Per volume, $2.50, by express prepaid. Per annum, in four cloth-bound volumes, $10.00. Lea Brothers & Co., publishers, Philadelphia and New York.

This invaluable periodical publication differs very materially in its scope from the ordinary year-books and epitomes of medicine and surgery. As the title of "Progressive Medicine" indicates, its pages are devoted to the real advances of medical science. The editors of its different departments are all scientific men and teachers of experience, and its contents are not mere abstracts of articles appearing in current medical literature. It may be compared to an advanced text-book of medicine and surgery, kept abreast of the times by continual revision and addition. Its sections are so arranged as to cover every branch of professional work without interference or repetition. It is only possible here to direct attention to the more important features in the present issue, although a vast amount of other valuable matter is included. In the present volume, Frazier, in the section on the surgery of the head, neck and chest, describes particularly the wonderful progress which has been made in the surgery of the skull and brain, especially in the diagnosis of brain tumors and abscesses; he also particularizes the latest researches into the surgery of the thyroid gland, and some of the remarkable results achieved in recent operations upon the heart. Among other topics, he also discusses the surgical treatment of diseases of the esophagus and stomach. Herrick writes the section on the infectious diseases, devoting especial attention the importance of serum therapy in the light of recent discoveries. His description of the methods in vogue in the management of typhoid fever, and pneumonia is remarkably full and of great value. Crandall, in considering diseases of children, describes in detail the methods of feeding and of milk modification, which are of such immense practical value in the treatment of diseases of infancy and childhood. In the section on pathology, Dr. Hektoen devotes particular attention to the late studies into the specific properties of the various tissues and fluids of the body. The study of cytotoxins, agglutinins and precipitins is of such importance and of such intricacy that a lucid explanation will prove of inestimable value to the great body of the profession, who otherwise would be unable to acquaint themselves with the recent strides

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achieved by workers in chemical pathology. A. Logan Turner, in the section on laryngology and rhinology, presents a summary of recent achievements in the correction of nasal deformities by means of paraffin injections. Randolph's article on Otology is devoted largely to a discussion of the methods employed in the treatment of various chronic aural conditions, heretofore considered as almost hopeless from a therapeutic standpoint. The volume is profusely illustrated and completed with an index, which is so arranged as very greatly to enhance its value to the busy practitioner as a work of reference.

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**An Epitome of Physiology**—For Students and Practitioners of Medicine. By THEODORE C. GUENTHER, M.D., of the Norwegian Hospital, Brooklyn, and AUGUSTUS E. GUENTHER, B.S., formerly Assistant in Physiology in the University of Michigan, Ann Arbor. In one 12mo volume of 250 pages, with 57 engravings. Cloth, $1.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1903.

This is a compact little treatise, free from discursive matter, but giving the established facts of physiology as developed at the present day. It is intended for and especially adapted to the needs of medical and dental students, but it will also prove of value to the practitioner who may wish to post himself on the most recent findings on the subject. No one will deny the value of epitomization, if well done, and while this compendious little work is by no means intended to take the place of the large volumes on Physiology, it certainly provides a handy and legitimate help to a knowledge of essentials to which a thorough understanding of details may be easily added. This Series of Medical Epitomes should not be confounded with the ordinary question compend, made up in question and answer form, for in the epitomes the matter is given connectedly, thus facilitating reading and study, and the questions for convenience in quizzing are appended to each chapter. Helpful illustrations are used where necessary throughout the book.

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**The American Year-Book of Medicine and Surgery for 1903.** A yearly digest of scientific progress and authoritative opinions in all branches of medicine and surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of GEORGE M. GOULD, A.M., M.D. In two volumes—Volume I, including General Medicine, octavo, 700 pages, fully illustrated; Volume II, General Surgery, octavo, 670 pages, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Per volume, cloth, $3.00 net; half morocco, $3.75 net. Canadian agents: J. A. Carveth & Co., Parliament Street, Toronto, Ont.

We do not know of any similar publication, either American or foreign, that can compete in any way with this excellent Year-Book, published by W. B. Saunders & Company. It is not an indiscriminate collection of extracts clipped from any

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and every journal; the matter is carefully selected, edited, and in numerous cases commented upon by the eminent authorities whom Dr. Gould has enlisted as his assistants. Every new theory and scientific discovery worthy of the consideration of the profession has found a place in this unusually complete Year-Book; and the names of the several editors are sufficient guarantee of a proper discrimination. The work comes to us in the same dress as last year—in two volumes. Volume I contains General Medicine, and Volume II General Surgery, the volumes being sold separately if desired. As usual, the illustrative feature is well taken care of, there being eleven full-page inserts, besides many excellent text-cuts. We strongly recommend Saunders' American Year-Book as the best work of its kind on the market.

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**A Text-Book of Diseases of the Eye.** A Handbook of Ophthalmic Practice for Students and Practitioners. By G. E. De Schweinitz, A.M., M.D., Professor of Ophthalmology in the University of Pennsylvania, etc. Fourth edition, revised, enlarged and entirely reset. Octavo volume of 773 pages, with 280 text-illustrations and 6 chromo-lithographic plates. Cloth, $5.00 net; sheep or half morocco, $6.00 net. Canadian agents: J. A. Carveth & Co., Toronto, Ont.

This book has attained its fourth edition, which is sufficient proof of its deserved popularity. Written in the hope that it would prove of service to both students and practitioners, it has more than fulfilled all expectations. The methods of examining the eyes, and the symptoms, diagnosis and treatment of ocular diseases have received the largest share of attention. The subject matter has been given in greater detail than is customary in books of its scope, doubtless because the author, being a teacher of wide experience, recognized more fully than others, the knowledge requisite for the successful practice of ophthalmic science. In this new edition the text has been thoroughly revised, and the entire work has been reset, many new chapters have been added, such as Thomson's Lantern Test for Color-Blindness, Hysteric Alopecia of the Eyelids, Metostatic Gonorrheal Conjunctivitis, Grill-like Keratitis (Haab), the so-called Holes in the Macula, Divergence-paralysis, Convergence-paralysis, and many others. A large number of therapeutic agents comparatively recently introduced, particularly the newer silver salts, are given in connection with the diseases in which they are indicated. The illustrative feature of the work has been greatly enhanced in value by the addition of many new cuts and six full-page chromo-lithographic plates, all most accurately portraying the pathologic conditions which they represent. There is no question that this fourth edition will attain the same popularity as did its predecessors.

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**Diseases of the Bronchi.** By Dr. F. A. HOFFMANN, of Leipsic. **Diseases of the Pleura.** By Dr. O. ROSENBACH, of Berlin. **Pneumonia.** By Dr. F. AUFRECHT, of Magdeburg. Edited, with additions, by JOHN A. MUSSER, M.D., Professor of Clinical Medicine, University of Pennsylvania. Handsome octavo volume of 1030 pages, illustrated, including 7 full-page colored lithographic plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; half morocco, $6.00 net. Canadian agents: J. A. Carveth & Co., Parliament Street, Toronto, Ont.

This, the fourth volume to be issued of Saunders' American Edition of Nothnagel's Practice, fulfils all expectations. The eminent authors of the valuable monographs which comprise this volume had, by their breadth of learning, their exhaustive research, and extensive practical experience, made their essays almost complete as originally written. Nevertheless, the author in the light of recent research, has made numerous valuable additions, so that the American edition represents the present state of our knowledge on the subjects under discussion. Among other things, these additions include new matter on the anatomy and physiology of the bronchi; on foreign bodies in the tubes; on the pathology, bacteriology and treatment of bronchitis, and the recent researches on bronchiectasis and on eosinophilia in asthma. Much new matter has been incorporated into the section on pneumonia, including the recent work of Hutchinson and others on the blood and urine in that disease. In the Pleurisy section will be found an account of the latest bacteriologic studies, and references to the work of Morse on the leucocytes in pleurisy, to that of Williams and others on X-ray diagnosis, and to the litten phenomenon. The work in every particular is thoroughly up-to-date, and no criticism is possible but praise.

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**Atlas and Epitome of Diseases of the Mouth, Pharynx and Nose.** By DR. L. GRUNWALD, of Munich. From the second revised and enlarged German edition. Edited, with additions, by JAMES E. NEWCOMB, M.D., Instructor in Laryngology, Cornell University Medical School; attending laryngologist to the Roosevelt Hospital, Out-patient Department. With 102 illustrations on 42 colored lithographic plates, 41 text-cuts, and 219 pages of text. Philadelphia and London: W. B. Saunders & Co., 1903. Cloth, $3.00 net; Canadian agents: Carveth & Co., Parliament Street, Toronto.

In designing this atlas the author has kept constantly in mind the needs of both student and practitioner, and as far as possible typical cases of the various diseases have been selected. The illustrations are described in the text in exactly the same way as a practised examiner would demonstrate the objective findings to his class, the book thus serving as a substitute for actual clinical work. The illustrations themselves are numerous and exceedingly well executed, portraying the conditions so strikingly that their study is almost equal to examination of the actual specimens. The editor has incorporated his own valuable experience, and has also included extensive notes on

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the use of the active principle of the suprarenal bodies in the materia medica of rhinology and laryngology. The work, besides being an excellent atlas and epitome of the diseases of the mouth, pharynx and nose, serves also as a text-book on the anatomy and physiology of these organs. Indeed, we wonder how the author has encompassed so much within such a limited space. We heartily commend the work as the best we have seen.

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**The Mattison Method in Morphinism**—A Modern and Humane Treatment of the Morphine Disease. By J. B. MATTISON, M.D., Medical Director, Brooklyn Home for Narcotic Inebriates. Cloth, 12 mo. Price, postpaid, $1.00.

This book—the outcome of thirty years study and experience—gives, in detail, a method of treating the morphine disease, original with the writer. Dr. Mattison is an authority on the treatment of morphinism, having long and large experience with the better class of morphinists, and asserts his method in advance of all others—in cases eligible for its use—to secure two leading objects—minimum duration of treatment and maximum freedom from pain. We commend it to all for whom the subject may have a special interest.

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**Atlas and Epitome of Abdominal Hernias.** By PRIVATDOCENT DR. GEORG SULTAN, of Gottingen. Edited, with additions, by WILLIAM B. COLEY, M.D., Clinical Lecturer on Surgery, Columbia University (College of Physicians and Surgeons). With 119 illustrations, 36 of them in colors, and 277 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $3.00 net. Canadian agents: J. A. Carveth & Co., Toronto, Ont.

This new addition to Saunders' series of Medical Hand-Atlases covers one of the most important subjects in the entire domain of medical teaching, since these hernias are not only exceedingly common, but the frequent occurrence of strangulation demands extraordinarily quick and energetic surgical intervention. While the well-known work of Macready will always remain a classic, it has never made any claims to deal with the operative side of the subject, and this is a side that, during the last decade, has been steadily growing in importance, until now it is absolutely essential to have a book treating of the surgical aspect of the subject. This present atlas does this to an admirable degree, and without question, will prove of very great value to the general surgeon and practitioner. The illustrations are not only very numerous, but they excel, in the accuracy of the portrayal of the conditions represented, those of any other work upon abdominal hernias with which we are familiar. Indeed, like all the other numbers of this excellent series, the work is a worthy exponent of our present knowledge of the subject, and in its field is unrivalled.



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**Bacteriological Technique.** A Laboratory Guide for the Medical, Dental and Technical Student. By J. W. H. EYRE, M.D., F.R.S. (Edin.), Bacteriologist to Guy's Hospital, and Lecturer on Bacteriology at the medical and dental schools, etc. Octavo of 375 pages, with 170 illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $2.50 net. Canadian agents: J. A. Carveth & Co, Toronto, Ont.

It is only within the last six or eight years that instructions in bacteriology has been given in our medical colleges, and yet this branch of medicine has become so important that no practitioner can afford to be ignorant of it. A study of the present work will enable one to get a clear knowledge of the principal facts of the science, and to make good clinical use of that knowledge. Section XVII on "Outlines for the study of the Pathogenic Bacteria" cannot fail to be of great service, both for class work and for individual study. The publishers' part of the work is well done, though we do not like the shiny paper on which it is printed. We understand that this makes the illustrations much clearer, but it is hard on the readers' eyes.

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**Diseases of the Pancreas, Diseases of the Suprarenal Capsules, and Diseases of the Liver.** By DR. L. OSER, of Vienna; DR. E. NEUSSER, of Vienna; and DRS. H. QUINCKE and G. HOPPE-SEYLELR, of Kiel. The entire volume edited, with additions, by Frederick A. Packard, M.D., late physician to the Pennsylvania and to the Children's Hospitals, Philadelphia; and Reginald H. Fitz, M.D.; Hersey Professor of the Theory and Practice of Physic, Harvard University Medical School, Boston. Handsome octavo of 918 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $5.00 net; half morocco, $6.00 net. Canadian agents: J. A. Carveth & Co., Parliament Street, Toronto, Ont.

This book combines in one volume the sum of our knowledge concerning diseases of the pancreas, the suprarenal capsules and the liver. Any contribution on these subjects is of great interest to the profession, and these monographs, proceeding from such distinguished investigators, will be found of unusual importance. In the sections on the pancreas and the suprarenals. the numerous experiments upon animals cited will be of the greatest value to the pathologist, the clinician, and the pathologic anatomist, affording an insight into the more deep-seated processes, and offering an opportunity of comparing the disturbances of function produced by morbid conditions experimentally induced, with bedside and autopsy observations. In editing these sections the editor has availed himself of the writings of Korte and Mayo Robson, especially the latter's important treatise on the etiology and treatment of chronic pancreatitis. An editorial addition to the section on the suprarenal capsules which seems especially noteworthy, is the investigations and discoveries on the active principles and therapeutic properties of suprarenal extract. The excellent article on the liver is as thorough and complete as those on the

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pancreas and suprarenals. Dr. Packard's careful clinical work, and his interest in the diseases of the liver, mark him as the most suitable person to edit this article. A survey of this work shows numerous critical additions, embodying the very latest contributions, besides expressions of his own views regarding subjects under discussion. He has devoted special care to diagnosis and treatment, including the surgical procedures that have recently found their place in this field. With these numerous editorial additions the articles are brought fully up to date, and have no equal in our language.

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**Diseases of the Skin.** Their Description, Pathology, Diagnosis and Treatment with Special Reference to the Skin Eruptions of Children and an Analysis of Fifteen Thousand Cases of Skin Disease. By H. RADCLIFFE-CROCKER, M.D., (Lond.), F.R.C.P. Physician for Diseases of the Skin in University College Hospital; Honorary Member of the American Dermatological Society; Membre Correspondant Etranger de la Société Française de Dermatologie; Correspondierendes Mitglied der Wiener Dermatologischen Gesselschaft; Socio Onorario della Societá Italiana di Dermatologiae Sifilografia; Late Physician to the East London Hospital for Children; Examiner in Medicine, Apothecaries' Hall, London. Third edition, revised, rewritten and enlarged. With 4 plates, 2 of which contain 12 colored figures, and 112 other illustrations. Octavo, 1,400 pages. Cloth, $5.00; sheep, $6.00, net. Canadian agents: Chandler and Massey Company, Limited, Toronto.

Crocker on the skin is a book built entirely upon superior merit. It has been acknowledged by the American medical press as "the best text-book in the English language." The new third edition maintains this high standard of excellence. Coming at a time when recent progress in dermatology makes an authoritative work upon the subject a positive necessity. It is a safe, accurate, eminently practical and strictly modern treatise, well and clearly written by a man of large experience and most excellent judgment. Though completely scientific, it is written in such a happy manner that the tyro may follow the writer almost as readily as the expert on diseases of the skin. It will be seen, therefore, that it appeals to general practitioners as well as specialists, while to the student it will serve as a valuable guide when he enters upon the more arduous task of practice. The etiology, symptomatology, pathology and minute anatomy, constitutional conditions, diagnosis and treatment of each disease mentioned is fully entered upon, the therapeutics, dietetics and general regimen coming in also for their due share of attention, great strength in the accuracy of statement and method and clearness of definition and differentiation being shown. The newer remedies and bacteriological researches, in their bearing upon dermatology, are carefully noted. The book proves Dr. Crocker to be closely in touch with the work and teachings of modern dermatology; and he has sifted from the vast accumulations of

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recent literature the facts and opinions which have a definite value and are worthy of permanent record. The illustrations, too, showing as they do the morbid conditions of the different structures affected in diseases of the skin, are a not unimportant feature. Many valuable additions to the text are noted in the new third edition of this standard work. The whole book has been systematically gone over and numerous changes made where recent progress in dermatology and a more exact knowledge of the subject has dictated. The result is a work every page of which bears the impress of thoroughness and large personal experience.

## NEW BOOKS.

Messrs. W. B. Saunders & Co. have in preparation for early publication the following new books and new editions:

"The Vermiform Appendix and its Diseases." By Howard A. Kelly, M.D., Professor of Gynecology, Johns Hopkins University, Baltimore, and E. Hurdon, M.D., Assistant in Gynecology, Johns Hopkins University, Baltimore.

"Myomata of the Uterus." By Howard A. Kelly, M.D., Professor of Gynecology, Johns Hopkins University, Baltimore.

"A Text-Book of Legal Medicine and Toxicology." Edited by Frederick Peterson, M.D., Chief of Clinic, Department of Neurology, College of Physicians and Surgeons of New York City, and Walter S. Haines, M.D., Professor of Chemistry, Pharmacy and Toxicology, Rush Medical College, in affiliation with the University of Chicago.

"A Text-Book of Operative Surgery." By Warren Stone Bickham, M.D., Assistant Instructor in Operative Surgery, College of Physicians and Surgeons, New York City.

"The Practical Application of the Röntgen Rays in Therapeutics and Diagnosis." By William Allen Pusey, M.D., Professor of Dermatology, College of Physicians and Surgeons Chicago; and Eugene W. Caldwell, B.S., Director of the Edward N. Gibbs Memorial X-ray Laboratory, and University and Bellevue Hospital Medical College, New York City.

"Tuberculosis." By Norman Bridge, M.D., of Los Angeles, Emeritus Professor of Medicine, Rush Medical College, in affiliation with the University of Chicago.

"A Text-Book of Obstetrics." By J. Clarence Webster, M.D., F.R.C.P. (Edin.), Professor of Obstetrics and Gynecology, Rush Medical College, in affiliation with the University of Chicago.

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"A Text-Book of Diseases of Women." By Barton Cooke Hirst, M.D., Professor of Obstetrics, University of Pennsylvania, Gynecologist to the Howard, the Orthopedic and the Philadelphia Hospitals.

"A Text-Book of Pathology." By Joseph McFarland, M.D., Professor of Pathology and Bacteriology, Medico-Chirurgical College, Philadelphia.

"The Blood in its Clinical and Pathologic Relations." By Alfred Stengel, M.D., Professor of Clinical Medicine, University of Pennsylvania, and C. Y. White, jr., M.D., Instructor in Clinical Medicine, University of Pennsylvania.

"A Thesaurus of Medical Words and Phrases." By Wilfred M. Barton, M.D., Assistant to Professor of Materia Medica and Therapeutics and Lecturer on Pharmacy, Georgetown University, Washington, D.C., and Walter A. Wells, M.D., Demonstrator of Laryngology and Rhinology, Georgetown University, Washington, D.C.

## New Editions.

"Medical Jurisprudence and Toxicology." By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence, Jefferson Medical College, Philadelphia, Member of the College of Physicians and Surgeons, Philadelphia, etc.

"A Text-Book of Modern Therapeutics." By A. A. Stevens, M.D., Lecturer on Physical Diagnosis, University of Pennsylvania, Professor of Pathology, Woman's Medical College, Philadelphia.

"Practical Points in Nursing" for nurses in private practice. By the late Emily A. M. Stoney, Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass.

"The Care of the Baby." By J. P. Crozer Griffith, M.D., Clinical Professor of Diseases of Children, University of Pennsylvania; Physician to the Children's Hospital, Philadelphia, etc.

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# Selections.

## SURGICAL HINTS.

Disease germs more readily float in dry air than in an atmosphere charged with moisture. In preparing a room for operation the use of steam will tend to purify the air by causing germs to fall to the floor, which it is advisable to moisten or to cover with damp sheets.

It is a rule, to which there are practically no exceptions, that if you feel fluctuation from pus anywhere there is no reason for waiting and poulticing before evacuation. It only makes the abscess larger, infects more tissue, and prolongs the disease. If the diagnosis be uncertain have recourse to the aspirating needle.

In prostatitis there is often pain at the end of the penis, as in stone in the bladder, but it is commonly less acute than in the latter. In cystitis the pain is chiefly before urinating, and suprapubic as to location, although when very severe, it may also be felt in the perineum. In stricture the pain is apt to be at or about the seat of the obstruction.

In a case of cancer of the uterus, if the organ is not freely movable the chances are much in favor of the disease having extended beyond the limits at which an operation can be of value. Yet, before refusing to operate the surgeon must feel reasonably certain that the immobility of this organ is not due to old inflammatory adhesions, having nothing to do with the malignant process.—*International Journal of Surgery.*

### The Intravenous Injection of Germicides in Septicemia.

Some of our readers may have observed reports in the daily journals of one or more cases of septicemia in which a cure apparently followed the injection into the blood of solutions of formaldehyde in strengths varying from 1 to 250,000 to 1 to 50,000. Since these reports in the daily journals have appeared, an article has been published in the *New York Medical Journal* of January 31, 1903, by Dr. Barrows, in which he records the case of a negress of twenty-six years who suffered from streptococcus infection, and from whose blood this micro organism was obtained in pure culture. This patient received a pint of 1-to-5000 aqueous solution of formaldehyde. Good results immediately followed, and ultimate recovery took place, at least

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to the extent that at the time of the report the patient was up and about the ward. This experiment of Barrows is not of course entirely new. Other investigators have from time to time attempted to combat blood poisoning by the intravenous injection of antiseptics and germicides. But in almost every instance the injection has not been a success, and the method has been discarded, the reason being that the material which was qualified to destroy the protoplasm of the invading microörganism was also qualified to destroy the living cells in the blood stream or to act upon the cells of the blood-vessels or the tissues surrounding them in a deleterious manner.

We confess to having some skepticism as to the value of this use of formaldehyde. It is true that Ewing has made experiments in which large quantities of formaldehyde were injected into the blood-vessels of rabbits without untoward results either upon the general system or upon the blood cells, and that as long ago as 1900 Maguire reported in the London *Lancet* the results of experiments which he made upon himself, showing that such injections were apparently harmless in moderate quantity. Thus, he injected as much as 100 cubic centimeters of a 1-to-2000 solution into the vein of his arm, and shortly afterward detected evidence of aldehyde in his urine; and again, on another occasion, an even larger quantity, with the result that he produced, first albuminuria, and then hematuria. Maguire thought that 1-to-200,000 of formaldehyde solution would act as an efficient germicide.

In these days of wonderful scientific discovery it is not safe to condemn any therapeutic procedure on purely theoretical grounds, and therefore we look forward with interest to further experimentation along this line, although we cannot help feeling that it is not founded as yet upon accurate scientific observation. It must be remembered that on the one hand under ordinary circumstances the blood possesses extraordinary power to destroy microörganisms, and that it is only when prolonged disease has exhausted this power that microörganisms can exist in it with impunity. Again, it seems scarcely credible that formaldehyde can restore the bacteriolytic power of the blood, nor can we believe that an agent which is powerful enough to destroy the streptococcus can circulate in the blood without doing any damage to the endothelial cells lining the blood-vessels, and the blood cells themselves. The fact that Maguire's observations of over two years ago have not been followed by the general application of this method to the treatment of septicemic attacks seems to us to prove that the profession in general has had a well-grounded timidity in regard to the employment of so radical a therapeutic measure. An item on this subject will be found in our Progress columns in this issue.

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Since this editorial note was written we have read with much interest an interesting series of experiments reported to the *St. Louis Medical Review* of January 31, 1903, by Dr. Snodgrass and Dr. Elbrecht. These investigators, recognizing the importance of this subject, no sooner heard of the experiments which had been made in New York than they promptly undertook a series in St. Louis. Their methods of research seem to have been accurately and carefully carried out. Using rabbits for the purpose of inoculation with the streptococcus, they injected formalin solutions in a quantity proportionate to that employed in New York for the woman who suffered from puerperal septicemia. It is a noteworthy fact that cultures from the heart's blood of all the rabbits gave pure cultures of streptococci, even when injections of formalin were used. They state that from their results they do not feel justified in drawing conclusions which would recommend or condemn the formalin treatment of septicemia, and they also conclude that formalin is slow to act because it requires over an hour for a 1-to-500 solution to kill the organisms, whereas 1 to 1000 required over four hours, and therefore the direct action of formalin in its dilute solutions must be extremely mild. The formalin which they employed was evidently excellent, as it was tested by the Professor of Chemistry in the Washington University and found to be of a strength of 38.98 per cent. They also state that since their experiments they have heard of two cases in St. Louis in which this method of treatment was carried out. One of these received the injection, and although the temperature and pulse were reduced, the patient died. The other patient was stated at last reports to be improving. It is an interesting fact that as the days go by more and more articles expressing disapproval of this plan of treatment are appearing, and it is probable that in a short time nothing more will be heard of it. Barrow's recommendation as to the method of treatment is summed up in his own words as follows: "Inject into the median basilic vein 500 cubic centimeters of a 1-to-5000 of formalin solution in water at the temperature of 60° to 70° Fahrenheit"—a temperature far too low for intravenous injection.—*Ed. Therapeutic Gazette.*

**ntestinal Obstruction Secondary to Pyo-Salpinx.**

Mr. Battle, St. Thomas's Hospital, operated on a married woman, æt. about 35, who had been admitted a week previously with symptoms of intestinal obstruction of some four or five days' duration. The symptoms were well marked: vomiting, abdominal pain, with peristalsis, constipation, and distension. The patient had refused to have anything done on admission, and it was only the continuance of pain, although some of her

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other symptoms were relieved by treatment, that induced her to consent. The abdomen was less distended than when she was admitted, and her condition was somewhat improved, although she looked very ill and had a rapid pulse. When the peritoneum had been opened a large coil of small intestine was found extending towards the pelvis, where it was evidently fixed, as it could not be drawn up, and returning coils were found to be collapsed. In the pelvis was what appeared to be a large uterus, but the right side of this enlargement appeared to fluctuate and was softened, so that the suspicion that it was a pyo-salpinx adherent to the uterus was come to. Posteriorly, also, there appeared to be a kind of sulcus which increased the impression of its nature. The intestines were packed away with gauze plugs and abdominal sponges, and the pyo-salpinx was removed. The pus was yellow and offensive, and escaped from a tear in the enveloping wall during removal; but with considerable difficulty the whole was cleared from the pelvis, and the right side of the uterus ligatured and cut away. After careful cleansing of the parts and changing of sponges, the cause of the intestinal obstruction was investigated; this was due to the fact that a coil of small intestine had become adherent to the back of the pyo-salpinx and then taken an abrupt turn forward, so that it was acutely kinked at that point; it was necessary to separate this from the margin of the cavity that had contained the pyo-salpinx, and although the point of immediate attachment had been much diminished in size, it was not apparently altered in structure, the bowel beyond was empty and small. A second coil was also adherent over a greater extent, but had not been kinked or obstructed in any way, still it took some force to separate it, and the peritoneum was considerably changed where the adhesions had been. The amount of shock resulting from the operation was at first very severe, and it was necessary to give a saline infusion. The glass tube which had been introduced into the pelvis was retained for three days and then removed, as the discharge was without odour and small in quantity, and a stitch which had been inserted at the operation was now tied so as to close the tube opening. The progress was not marked by any rise of temperature, and all symptoms of obstruction ceased. Mr. Battle said that the obstruction was due to an unusual cause; that one hardly expected to find such urgent symptoms dependent upon a disease which was evidently itself of a chronic character. He pointed out that the operation required in the patient's then condition was necessarily very severe, but the woman had to face the risk of removal of the pyo-salpinx and the after freeing of the intestine, as the latter alone might have caused a leakage from the pyo-salpinx at the point of

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separation, and this must have been followed by a fatal septic peritonitis. In many cases of removal of a pyo-salpinx, especially when the adhesions are dense, he said, the shock is severe, although the patient is in a good condition and ready for the operation; in the present case the woman was already weakened and very ill as the result of some days' intestinal obstruction. The result of the operation was satisfactory, and the patient left the hospital three weeks after operation.—*Medical Press and Circular.*

## The Causation of Epilepsy.

Heretofore great uncertainty prevailed as to the cause of epilepsy, but the investigations of Mr. Bea undoubtedly throw some light upon the subject. Numerous blood examinations show the constant presence in the blood of a minute parasite just before an attack. The parasite looks like a small point, which moves rapidly, and sometimes forms into chains which become attached to red corpuscles.—*Medical Record.*

## Prophylactic Measures Against Venereal Diseases, Especially in the Army.

That venereal diseases are spreading with alarming rapidity among soldiers is an indisputable fact, especially well known to the army surgeons of every nation. Thus GOULADZE (*Russ. med. Rundschau*, No. 1) brings forward statistics proving that out of 900,000 men, embracing the total strength of the standing army of the Russian Empire, there were about 35,000 venereal cases. In speaking of prophylaxis, the author insists upon the physician gaining the patient's confidence, so that the full importance of the baneful disease is clearly and understandingly impressed upon the latter's mind. He especially deprecates the use of alcohol, as he finds that out of every ten cases of infection at least seven occurred while the patient was under the influence of Bacchus. Finally, he insists upon the observance of the following prophylactic measures: (1) Avoid sexual intercourse while under the influence of alcohol; (2) absolute abstinence in case any abrasion or erosion be detected on the membrum virile; (3) but one coitus at a time, for it has been proved beyond doubt that males are more readily exposed to infection who indulge in several connections at a séance; (4) anoint the penis just before the act with a thick layer of carbolated vaseline (four per cent.), and insist that your companion wash her genitalia with a three per cent. solution of carbolic acid; (5) after completion of the act wash the penis with soap and water, and a one-half per cent. solution of sublimate, or, when not at hand, with clean plain water, or with one's own urine.—*Medical News.*

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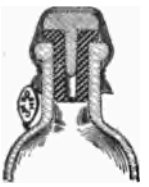

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# Miscellaneous.

## Post-mortem Examinations in Hospitals.

It would be a good thing if it could be imposed as a condition of admission to the benefits of hospital treatment that a post-mortem examination on all patients dying in such institutions were an indispensable sequel. An absurd prejudice against these examinations is an article of faith with many, and much valuable pathological information is thus lost to science. Unless the circumstances are such as to justify an inquiry into the cause of death, we believe there is no legal impediment to the carrying out of such examinations, a dead body, according to law, not being vested in anyone. An action for trespass would only lie when the examination takes place in a private house against the will of the householder. At the same time it must be conceded that the prejudice is strong and, from a certain point of view, respectable, so that methods of persuasion are preferable to quasi-compulsion.—*Medical Press and Circular.*

## Psychical Research and Psychological Derangement.

Much attention has recently been directed to that section of the realm of the unknown into which so-called "psychical research" students, "spiritualists," and investigators of the perplexities of psychology have sought to throw out experimental "connections." The recent work of Mr. Podmore, the posthumous volumes of Mr. Myers, the address of Sir Oliver Lodge, numberless essays in current periodical literature, revelations in our law courts, and even advertisements in the daily papers and public streets, only faintly indicate the widespread interest and, as we think, at least for some personalities, the dangerous entanglements of a fascination which is not without many serious elements of danger to those of unstable mind and with ill-balanced emotions and mental tendencies which may readily lead to actual psychological derangement. It is useless for medical men to ridicule and scoff at these "recreations" or "researches" as mere manifestations of superstition and idle dealings with "spooks." It is for them to make themselves acquainted with the influences at work in the minds and lives of those who are or may be their patients, and by a recognition of the trend of psychological researches seek to restrain those coming under their direction or seeking their advice from pursuing studies in an unworthy or irrational fashion or confusing the study of physiological and psychological processes with patholological manifestations. Medical men will do well to understand that in the prevailing fashion for so-called "psychical research" there are many elements of danger which a clear understanding and wise discretion may do much to avert.—*Medical Age.*

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The beef used is specially selected and transformed into peptones by a process of natural peptic digestion whereby none of the elements necessary to generation of vital force is lost.

According to Fothergill, beef tea, whether made from fresh meat or Extract of beef, simply serves as a stimulant, and possesses no nutritive value, because the fibrin, sulphur, adipose tissue, phosphates of lime and magnesia, and other valuable constituents appear in the residuum.

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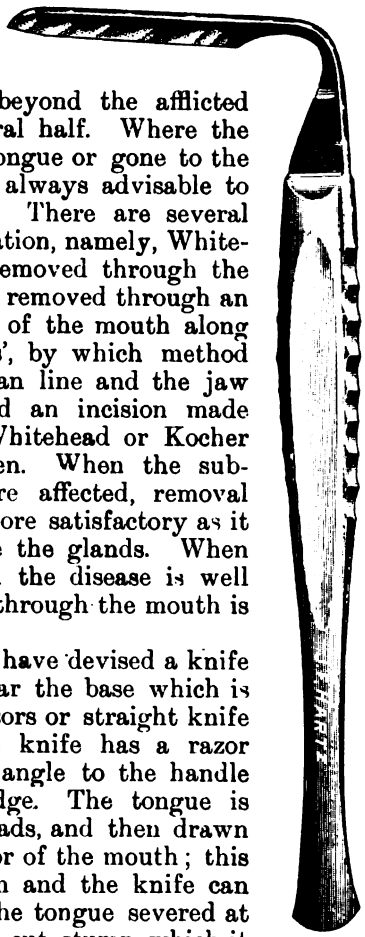
# EXCISION OF THE TONGUE.*

By ANGUS McLEAN, M.D., Detroit, Mich.

Removal of the tongue for cancer may be partial or complete. When the disease is confined to one border of the tongue and has not extended to the median line or septum the disease may be removed by splitting the tongue along the median line to some distance beyond the afflicted part and then excising the lateral half. Where the disease has spread across the tongue or gone to the median line or beyond it, it is always advisable to remove the tongue completely. There are several methods of performing this operation, namely, Whitehead's, by which the tongue is removed through the mouth; Kochers', by which it is removed through an incision made through the floor of the mouth along the inner side of jaw; Heatons', by which method the lower lip is incised in median line and the jaw separated at the symphisis and an incision made along the median line. The Whitehead or Kocher method is the one mostly chosen. When the submaxillary lymphatic glands are affected, removal through floor of the mouth is more satisfactory as it gives an opportunity to remove the glands. When the glands are not affected and the disease is well confined to the tongue removal through the mouth is selected.



For this method of removal I have devised a knife for severing the tongue at or near the base which is a great advantage over the scissors or straight knife that is ordinarily used. This knife has a razor shaped blade hung at a right angle to the handle with a right lateral cutting edge. The tongue is transfixed with heavy silk threads, and then drawn well forward and against the floor of the mouth; this gives a good view of the dorsum and the knife can be passed into the mouth and the tongue severed at the desired point leaving a clean cut stump which it is impossible to obtain with the ecraseur, scissors or ordinary knife.

The tongue should be first freed from the lateral borders and floor of the mouth by scissors or ordinary knife.

When scissors are used to amputate the tongue they have to

* Written for the "Detroit Medical Journal."

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be used from beneath the tongue and the tongue elevated; after the first incision free bleeding takes place and the field of operation is obscured. When the tongue is pulled well down and forward the lingual arteries are stretched and compressed, and the hemorrhage is much less with the tongue in this position than when elevated.

I have used this knife in two amputations of the tongue with great satisfaction.

---

## The Influence of Climate on Character.

Climate has an undoubted influence on the character. Persons take from atmospheric conditions and surroundings many of their mental attributes; they seem to absorb into their being something akin to the climate and environment. Those born in a rugged, wild and bleak country are generally rugged, hardy and stern themselves, while those brought up in a rich, warm, and genial climate and surroundings are themselves usually of a generous, easy-going nature. The London *Evening Standard*, of a recent date, discusses the subject and says: "In the lands of the sun, where the earth offers the necessities and luxuries of life almost without labor, man is sapped of energy, and leads a lotos existence. No effort is demanded of him, and the capacity to do dwindles within him. He lolls sensuously in the lap of nature, a materialist and without ambition."

A temperate, bracing climate is the most healthy, both for body and mind. The strong air imparts force of character as well as power of limb. No one is superior to atmospheric conditions; it affects all, though sometimes unconsciously. Investigations in schools show that pupils are able to do their best work when the weather is cold, calm and clear. In large factories, it is stated that an unpleasant day will reduce the output by 10 per cent. Again, continued hot weather invariably brings forth a crop of crimes of passion, while the summer is also the season most prolific of suicide. Rain seems to exert a deterrent effect on crime, and fewer deeds of violence are committed on cloudy days than on bright ones.

Whatever there may be said to the contrary, the fact is undeniable that climate influences to a remarkable degree character and conduct.—*N. Y. Med. Record.*

---

A tent city for consumptives is to be established in the suburbs of Santa Fe. A tract of land has been bought in the foothills south-east of this city, with southern exposure, whereon will be laid out a model tent city, with water supply, electric lights, telephone, sewer, etc., to be a sanitarium on a new and large scale. A number of New York health seekers have already applied for tents.

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, MAY, 1903. NO. 5

## Original Communications.

### FOOD IN HEALTH AND DISEASE.*

By ADAM H. WRIGHT, B.A., M.D.
Professor of Obstetrics, University of Toronto.

I have frequently endeavored to give prominence to the importance of diet in the prevention and treatment of disease. If you ask me how much we knew about proper methods of feeding in my student days I shall have to confess that our ideas on the subject were somewhat vague. We supposed, in a general way, that a milk diet was a proper thing in all cases of fever. We sometimes went a little further and varied our diet to some extent. We thought that beef tea might occasionally be added to our diet list. We did not believe in going into details to any great extent. A simple direction for the patient to take beef tea and milk, alternately, every two or three hours, was often deemed sufficient. On the other hand, we sometimes thought it well to limit special articles of food under certain circumstances. In accordance with this last idea we reduced the amount of meat, starch and sugar, in connection with such diseases as nephritis, rheumatism, diabetes, etc.

You have advanced to some extent in these modern days. You have studied physiology, under favorable circumstances, and have learned much about the phenomena of metabolism and the nutritive value of foods, but whether you will retain enough of this knowledge to apply it practically in the treatment of your patients in active practice, I know not. I fear that a large number of physicians in this and other countries have very crude, if not incorrect, ideas as to dietary. It is

* Portion of lecture to the student class of 1902-3.



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not a part of my duty to teach dietetics excepting in so far as the subject is incidentally connected with many of the diseases of pregnancy and the puerperium. As a correct dietary is so vastly important in general toxemia of pregnancy I desire to make a few remarks on this subject in this connection.

There appears to be some charm for the laity in certain of the modern systems of diet; such, for instance, as the milk, the Salisbury, the koumiss, the whey, the proteid, and the vegetarian cures. I must admit that these, in certain cases, are to some extent successful. Many people are suffering simply because of eating more food than the digestive organs can assimilate. They may have used articles of food, which are simple enough in themselves, in combinations made indigestible by a certain mixing of physiological incompatibilities in the stomach. For these, a certain restriction of food, such as is necessitated by these so-called cures, may do good for a time. No one, however, can grow and continue vigorous and strong on a greatly restricted food régime.

Pritchard correctly observes that we should avoid such general observations as that meat is bad in kidney disease or that sugar is bad for rheumatism, as a moment's thought will demonstrate that such observations are nonsense. Meat we must have, and sugar we must have in some form or other. They are not bad for any condition, they are only injurious when taken in excess. Let us devote our energies to the limitation and definition of quantity. The further we limit the better, as everybody overeats and will overeat.

The same author, in referring to some fads connected with certain cures, speaks of diet in nephritis. Although I have already spoken on this subject in a former lecture I desire now to repeat, to a certain extent, and will quote from Pritchard. He asks us to take, for example, the case of a man suffering from some form of nephritis in which it is desirable and necessary to shield the kidneys from undue work. It is recognized, and rightly so, that nitrogenous elements of food should be cut down to a minimum, and, with this end in view, in nine cases out of ten, he is put upon a milk diet. Pritchard thinks, however, that in such a case this diet falls very far short of perfection, not only as regards the relative proportion of the essential constituents but also from the point of view of digestibility. "Nevertheless, from time immemorial, it has served, and served more or less effectively, as an exclusive food for such and similar complaints, and with all its shortcomings I have not a word to say against the use of milk. But why, I ask, should a man be condemned to a milk diet which contains a high percentage (4 per cent.) of nitrogenous elements and be refused the chop, or beef steak, in which his soul delights?

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Seeing that a quarter of a pound of lean meat represents the nitrogenous equivolent of one pint of milk, why should we be allowed the one and refused the other?"

Let us consider some of the evils arising from injudicious eating. Purdy gave us many valuable lessons in this connection. He told us the greatest dietetic sin of the average American (and Canadian, I may add) is his meat-eating propensity. He eats meat generally twice, frequently three times a day, thus laying up on his secretory organs a tax in the disposal of waste products that is physiologically prodigious. The following are certain conditions which may result from excessive meat eating:

Premature hardening of the arteries, entailing those dangers from arterial hemorrhage of which apoplexy is the type; impaired nutrition with premature old age; enlargement of the heart with degeneration of its muscle, leading to the so-called heart failure; Bright's disease; rheumatism; gout.

The next most serious dietetic error is the excessive use of sweet and starchy foods, that is, the carbohydrates. Such excesses cause stomach indigestion with, especially, flatulent dyspepsia, habitual overtaxation of the liver leading to impairment of that organ with bilious attacks, the development of gall stones and the induction of diabetes.

The third great dietetic error is the consumption of excessive quantities of food. The dietary may be perfect as to quality, but, if the quantity exceeds the physiological requirements harm will result. Although the remarks of Pritchard and Purdy may refer especially to men they are equally applicable to women. No one can lay down absolute rules as to dietary which are suitable to all women. Women during pregnancy often appear to eat larger quantities of food and assimilate it quite as well as, if not better than, before pregnancy. On the other hand, they may suffer much from vomiting, especially during the first half. Under such circumstances, some women think that they retain almost nothing, or certainly only a small proportion of the food ingested, and yet thrive and gain in weight apart from the increased size of the uterus and its contents. My desire is to impress upon you the importance of studying this subject carefully. There is something sublimely simple about certain of the foods recommended, particularly the absolute milk diet. I desire to warn you against accepting extreme views in any direction. Learn what you can respecting the virtues, or otherwise, of any or all of the so-called cures, but do not get so narrow as to be carried too far in your enthusiasm in connection with any one plan. Aim at correct ideas both as to quality and quantity, remembering, in connection with the former, that a mixed diet within certain

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limitations is the best in all respects, and, on the other hand, that excess in quantity produces greater evils than insufficiency.

Before referring particularly to milk diet, as I shall do later on, especially from a clinical standpoint, I desire to say a few words as to the elementary principles which should govern our ideas as to diet whether in sickness or in health.

In all cases the system demands the following classes of food: Proteids, carbohydrates, hydrocarbons, salts, water.

Every diet, in order to be physiologically adequate, must contain articles from each of these groups. It is a very simple matter to make such an elementary statement, but it frequently becomes a very difficult task to decide as to the relative proportions of these different foods which are required. As to quantity, considering the matter from a physiological standpoint, the non-nitrogenous elements should be in the ratio of one to four, and the absolute amount of each required for twenty-four hours is:

| | |
|---|---|
| Proteids (nitrogenous foods) | 4½ oz (140 gm.) |
| Carbohydrates (sweet and starchy foods) | 14 oz (435 gm.) |
| Hydrocarbons (fatty foods) | 3 oz (93 gm.) |
| Water | 1 to 2 qts. (1 to 2 litres.) |

These quantities are supposed to be suited for the healthy adult of average weight. We have to consider in connection therewith the deviation from health, habits (whether sedentary or otherwise) and existing conditions, such as climate, environment, etc. I may say, in a general way, that these figures furnish a fairly reliable basis, and an intelligent remembrance of them will prevent us from falling into gross errors.

*Beverages.*—In considering the liquid portion of a dietary we always think of water as the best beverage. We find, however, in almost all our beverages, other than plain water, a certain amount, often a large amount, of sugar. Many of our druggists and grocers sell, during the hot months of summer, large quantities of vile compounds under the name of soda water, which contains various flavoring extracts, lots of cheap sugar, all sorts and conditions of water, but no soda. These mixtures are sometimes made still more atrocious by the addition of highly flavored ice creams. We have sugar in our wines in varying amounts, from one-eighth of a pound in a quart of average champagne, to one-half a pound in one quart of certain kinds of domestic wine. You can easily understand how much harm the sugar in beverages can do to those who indulge in them to any extent, especially if they also eat large amounts of sweet and starchy foods. The headache and indigestion following the ingestion of sweet wines is often chiefly, and always partly, due to the sugar and not the alcohol.

Although we may understand thoroughly these simple and

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elementary facts, and may have a clear idea that the ordinary diet for a pregnant woman should consist of 4½ ounces of nitrogenous foods, 3 ounces of fatty foods, 14 ounces of sweet and starchy foods, 2 quarts of liquid food, including water, per day, yet we may not be able to draw up a practical dietary representing such foods in their proper proportions. In order to do this we should also have a knowledge of the elementary analysis of our common food stuffs.

I am now speaking to a class of intelligent students who expect to graduate in a few weeks. How many of you can tell me what percentage of albuminates or proteids you will find in a pound of fat pork or lean beef? What percentage of starch in a pound of bread? What percentage of fat in a pint of cream? If you cannot furnish me this information with reference to our most simple and common foods I might be excused for asking you what use you are going to make of your knowledge as to the required daily amounts of the nitrogenous, the sweet and starchy, the fatty and the liquid foods for a healthy adult. If, however, you bear in mind the fact that only a small proportion of proteids is required in a mixed diet, and if you go a little further and remember that only four or five ounces of butchers' meat per day is sufficient to renew the ordinary waste of muscular tissue; also that twenty to thirty ounces of butter, bread, potatoes, sugar, etc., will be sufficient for the various operations of the economy, as represented by heat and force, you are not likely to go far wrong. With such knowledge you are not likely to forget that a pregnant woman, especially one who has toxemia, should not eat bacon and eggs for breakfast; milk, cheese and cold ham for luncheon; and roast mutton, game and sweet domestic wine for dinner. You could easily understand the great dietetic blunder (as Sir Henry Thompson terms it) made by the woman who washes down ample slices of roast beef with draughts of new milk, (as Sir Henry Thompson goes on to say) an unwisely devised combination, even for those of active habits, but for men and women whose lives are little occupied by exercise one of the greatest dietetic blunders which can be perpetrated.

My desire in these rather discursive remarks about foods, is to impress upon you simple, practical facts in connection with diet for pregnant women in health and disease; to show that errors of diet are followed by serious results; to stimulate you to take an active and intelligent interest in your patients in such regards under all circumstances.

30 Gerrard Street East, Toronto.

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# THE INDIAN AND THE INDIAN MEDICINE MAN.

By J. F. W. ROSS, M.D., Toronto.

(Opening lecture of the Faculty of Medicine, University of Toronto, October, 1901.)

The Indian Chief, Tecumseth, it has been said, received the stamp of greatne-s from the hand of nature. Had his lot been cast in a different sphere he would have shone as one of the most distinguished of men. He was a powerful man, with the soul of a hero. There was an uncommon dignity in his countenance and manners. After death, though he wore no insignia of office, he was easily discovered from among the rest of the slain. Though six feet high, he was perfectly proportioned. Such a type of man is but one among many, and there were many other Indians like him. After the red man came into contact with the white he degenerated. To peaceful communities came the fur trade, and a hell was soon established. The introduction of alcohol, and its attendant evils, made the Indian what he is to-day, but, nevertheless, we are able to look back and admire what existed before the fall.

The vindictive blood of the savage runs in the veins of many of the people of this continent who do not know it. It is difficult to estimate the effect that this mixture has had on the progress of American and Canadian affairs.

The skin of the Indian was dark, of a reddish hue, and thinner than that of the white man. The surface was very smooth and lines and indentations regular. It has been stated that the poison oak and the poison ivy did not affect the skin of the Indian; in fact, they are said to have used the stem of the poison oak for making baskets. The eyes are black and deep set, the nose large and aquiline. The hair of many was black, but there were many of both sexes, ranging from infancy to old age, with hair of a bright silvery grey. Sometimes the hair was almost white. The beard, as a rule, was deficient.

The blanket was the chief article of dress. Red blankets were used by the young and green ones by the aged. Leggings were worn by both men and women, and, as a consequence, were differently shaped. The blankets and the mantelettes used by the women generally lasted about a year.

Many of the whites assumed the garb of the Indian. We read that when Henry was rescued from death at the taking of Fort Michilimackinac, he was forced to adopt the garb of an Indian. His foster father, who had taken him under his protection, cut off his hair and shaved his head, with the exception

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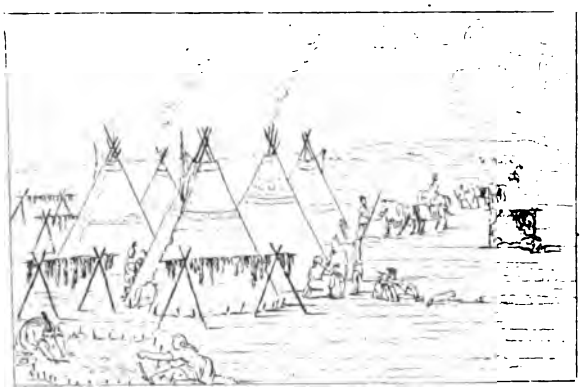
of a spot on the crown, painted his face with three or four different colors, and provided a shirt for him ornamented with vermilion mixed with grease; a collar of wampum was placed upon his neck and a chain of wampum was suspended on his breast. Both arms were decorated with bands of silver above the elbow, and others were placed upon his wrists. His legs were covered with footgear corresponding to what we call "artics," made of scarlet cloth. Over all he wore a scarlet blanket or mantle, and on his head a large bunch of feathers. He says that the ladies of the village thought he was very much improved, and they even condescended to call him handsome.

Moccasins were used on the feet, and travellers who have walked long distances in moccasins without a stiff sole have found it necessary to turn the toes in to rest the feet. This appears to be the reason why the Indians turned the toes in.



No. 1.

SMOKING AND DRYING SKINS AND MEAT.

Foods such as meats and fish were preserved by smoking and hanging in the air (plate 1). The meat of the buffalo was oftentimes cured in the sun without either smoke or salt. Jerked buffalo meat was prepared by being c .t into thin slices and hung over the fire to dry. In this way it was cured indefinitely. The Indians seldom ate raw meat. When the meat was cooked it was well done, and most frequently roasted. Other foods, such as Indian corn, maize, and wild rice, were used to a very great extent. The preparation of the corn is described by Henry in his journals. It was boiled in a strong lye to facilitate the removal of the husks. It was then mashed and dried, when it became soft and friable like rice. Another author says that the corn was placed in a mixture of water and wood ashes, the

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weak lye thus produced would loosen the hard tough skin covering each grain in from ten to fifteen minutes. It was then taken from the pot and thoroughly washed in a basket by dipping it into a stream or pouring water over it. After it was dried for a short time it was pounded in the cornmill. The mill consisted of a log of hardwood, two feet long, the upper end of which had been burned out to form a half-egg shaped hole nine or ten inches deep. A pounder, or beetle, was used to crush the corn and the meal was then passed through a fine sieve, and the coarser portion was again returned to the mill and treated as before.

The allowance of corn for each man on a voyage was a quart a day. A bushel, with two pounds of prepared fat, was reckoned to be sufficient food for a month's subsistence. No other allowance of any kind was made, not even of salt, and bread was never

No. 2.

WELL FORMED WOMEN, SHOWING LONG HAIR AND DRESS.

thought of. The men were healthy and capable of performing heavy labor.

Sugar was used by the Indians and was produced by boiling down the sap of the maple tree. I find a notice in an English magazine of 1765 stating that the Americans had discovered the method of making sugar from a liquid obtained by boring the maple tree. Indians no doubt used this method before the arrival of the white man.

Many berries were gathered and used as food. Among these were whortleberries, blackberries, raspberries, strawberries and cranberries. Wild honey was occasionally obtained. As vegetables, wild potatoes, artichokes, and various roots were used. Very little salt was used, and milk was not relished. The food was boiled until it was well done.

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At first the cooking was done in wooden vessels, the water being boiled by hot stones immersed in them. This vessel was called an Assinaboine or stone boiler. Brass, iron and tin utensils came into use later on. The meals were eaten at no regular hour. The Indian ate, as a rule, when he was hungry. It is believed that they were enormous eaters, but many observers say that this was not the case. The women and the children did gormandize, but the men ate but two meals a day, and practiced great prudence and self-denial in this respect. They were forced to live carefully in order that they might be equal to the fatigues of war and of the chase. Like the Jews, they would not eat pork.

Marriages took place, as a rule, early. The bride was purchased with a few robes or a few horses, and then the expense ended. After this she was more than self-supporting. The women were well formed (plate 2.) They preferred female to male

No. 3.

TORTURING CEREMONIES IN THE MEDICINE LODGE.

attire. There were more women than men among the Indians, notwithstanding the fact that more males were born. Even when no wars existed more males died than females. The women cooked, brought wood and water, dried the meat, dressed the robes, made clothing, collected the lodge poles, packed the horses, cultivated the ground, and performed tasks generally performed by men or servants. The women were not servants, however. They indulged in athletics and played games. Sometimes they were admitted to the councils of the men and even to the ranks of the medicine man.

Owing to the amalgamation of the white and the red race the red man is rapidly losing his identity. In this respect he differs greatly from the negro.

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The Indians were a people of aches and pains. Some of them would lie in bed for months with trivial ailments. They were apt to pay considerable attention to minor troubles. It has been said that the Indian would ride 100 miles for salve for a chapped lip, but that he would die of pneumonia without calling in the assistance of a medicine man. They were undoubtedly able to undergo considerable fatigue.

When aged and infirm they received an annuity from the tribe, or help from friends and neighbors. The chiefs generally interested themselves in the aged and infirm.

The Indians believed in the immortality of the soul, and had glimpses of the beauties and the happiness of the life to come.

It is said to have been characteristic of the Indian to suffer in silence (plate 3), and die composedly. Graves were dug facing the east and the west, the head of the corpse was placed in the eastern portion of the grave so that he or she might be able to look to the west towards the happy hunting ground).

No. 4.

DRUMS AND RATTLES.

*Abodes.*—The lodges were constructed by placing poles in a circle on the ground. These poles were joined together on the top, and over all buffalo robes or skins were placed. A spacious opening was left above to let out the smoke and for purposes of ventilation. The fire was built in the centre of the lodge to warm the air, and as this air ascended through the opening the tepee was ventilated.

*Music.*—The Indians used various musical instruments, among which were drums (plate 4), rattles, whistles and lutes. The drums and the rattles were used when medical degrees were granted.

*Literature or Writing.*—The picture writing was very curious. The robe of a distinguished doctor or medicine man is worth studying (plate 5). In the one shown the medicine man has represented himself in full dress on his favorite horse. From the drawing at the top and the bottom of the robe it would seem that he has set up his claims as a warrior, having killed seven men in battle. On either side of the robe are to be found

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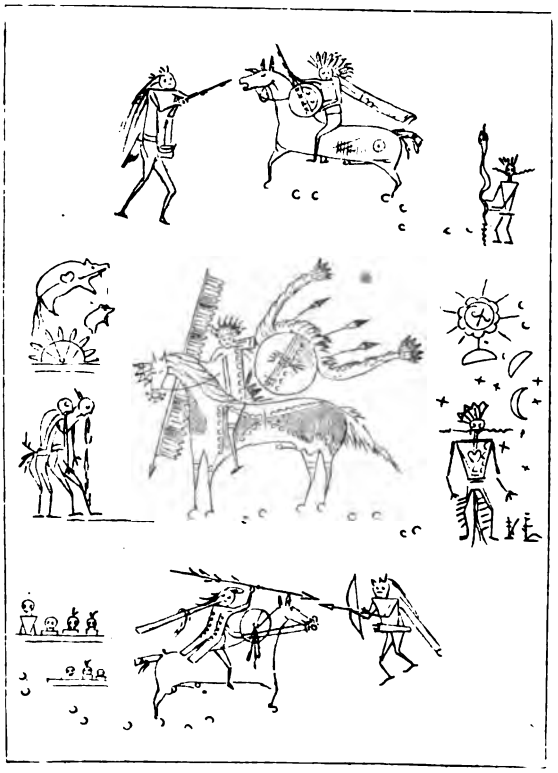
numerous figures denoting his profession. One represents him vomiting a patient with herbs. In another place he has represented his medicine, or totem, the bear, with the rising sun and the different phases of the moon, to which these magicians looked for the operation of their charms and mysteries in effecting the cure of the afflicted.

## Indian Medical Education.

England has been called the Paradise of quacks. Every nation is infested with them, and they are patronized not only



No. 5.

ROBE OF AN EMINENT MEDICINE MAN.

by the poor and uneducated but by the rich and influential. The unbounded credulity of the white man is akin to that of the savages. We find him placing his trust in the tar water of Bishop Parkman, in the metallic tractors of Perkin, in the animal magnetism of Prescott, in the granules of Hahneman, and in the Christian Science and faith cure of Mrs. Eddy.

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We must not forget that we civilized people have our medical relics, for it is not very long since curious remedies were in use by the members of the medical profession. We find that the ashes of human hair mixed with hog's lard were used to anoint dislocated joints, that ashes were used to stop bleeding, that an oil distilled from the ashes of human hair and mixed with honey was rubbed on to cause the hair to grow.

Among civilized nations we have a written history of our relics and this history is handed down to us in the shape of books of reference that have been printed from time to time. Among the savage nations the history of the relics has been partly written in hieroglyphics and has been in part handed down by word of mouth. Much of the information thus to be obtained depends upon the statements of eye witnesses or of those who were intimately associated with the grand medicine lodges.

No. 6.

MANDAN INDIAN VILLAGE.

A very large population inhabited the North American continent before the advent of the white man, and descendants of the aborigines are still to be met with. The Indians lived in towns and villages (plates 6 and 7) where there was to be found all the noise and bustle incident upon such congregations of people. The medicine men were very prominent in their midst. They were highly respected and possessed great power. There were many curious superstitions regarding them.

It was believed that if the medicine man was not paid no cure would be effected, but that if he was paid his work would be well done and the patient would receive great benefit. The medicine man was not always paid in specie but, like many of our brethren of the out-lying districts, he was forced to accept

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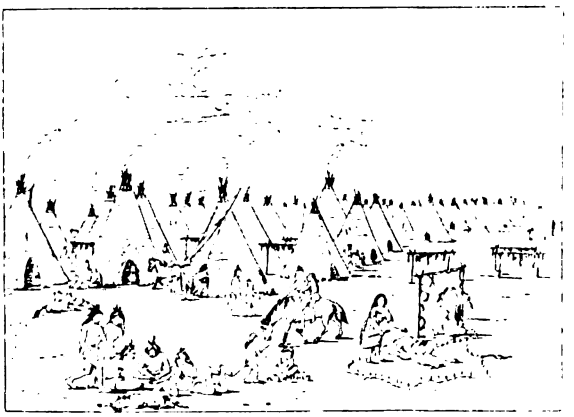
various commodities in return for his services. At times he was found to be more grasping than he should have been, but all this goes to prove that there is nothing new under the sun.

The Indians possessed a greater knowledge of medicine and surgery than the Chinese, although the Chinese profess to have a much more ancient civilization. The Indian knew that heat made the blood circulate more freely; he knew that the lungs were the organs with which the animal breathed, and that the kidneys must act or else death would certainly ensue.

He had no very distinct or definite ideas regarding modern pathology. The knowledge of pathology among civilized nations has only been obtained of late years, very largely through the aid of the microscope, the *post mortem* examination, and a study of organic chemistry.



No. 7.

CAMANCHE INDIAN VILLAGE.

Some of the Indian tribes thought that disease was due to some mythic existence that could be driven out by incantations, and propitiated by rites and ceremonies. Others again thought that disease was due to bile in the painful part and the medicine man attempted to draw this out through a bone that was used as a suction tube. He endeavored to force this belief upon the sick one by spitting out saliva that was tinged by the juice of a root that he was chewing (plate 8). Others believed that all pains were due to the bite of worms situated in various parts of the body.

The aborigines learned some comparative anatomy from the experience of the chase. They had names for the heart, the lungs, the liver, the windpipe, and for some other parts.

There were several types of medicine men (plate 9), some of them of much more importance than others. The

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medicine men were not always free from danger, and they frequently became victims to superstitious belief. If a patient died, the death was believed to be due to the malefic arts of the doctor, and such a circumstance was sufficient to bring upon him the resentment of relatives.

All tribes selected some animal to which they attributed supernatural or medicinal powers. The whale was chosen by the Indians on the north coast, the war eagle by those on the east side of the Rocky Mountains, and the wolf by those inhabiting the Columbia River district.

An initiation into the Grand Medicine Lodge reminded one of Masonic ceremonies. Medecin, the French word for doctor, was corrupted by the English speaking people until at last they called the Indian doctor, the medicine man. Some of the

No. 8.

MEDICINE MAN REMOVING DISEASE.

medicine was supposed to be good and some of it was supposed to be evil Certain articles were called good medicine or, in other words, propitious and unpropitious.

The society of the Mide or the Medical Faculty was known as the Mide-wiwin. The place in which the degrees were conferred was called the Mide-wegan, or the Grand Medicine Lodge (plate 10). The teachers who officiated were called priests, corresponding to our professors. Four degrees were granted to a candidate and a period of a year elapsed between the granting of each degree, so that the course of study consumed at least four years.

There were three different varieties of the mystery man, called the Mide, the Jessakid, and the Wabeno.

The Mide, or true medicine man, was also a Shaman, though by various authors he has been called prophet, seer, priest, and a pow-wow man.

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The Jessakid was also called a seer or prophet but was commonly known as a juggler or a revealer of hidden truths. He had no medical association by which he was bound to others who practised his art. His power was to cause evil, while that of the genuine Mide was to avert it. The lodge used by him was made of four poles that were placed in the ground in such a way as to form an upright cylinder. During the exercise of his functions he got into this and swayed to and fro and made various noises and answered questions that were asked him. If everything was favorable the answers were soon received.

No. 9.

BLACKFOOT MEDICINE MAN IN ROBES.

The Wabeno were called the men of the dawn. Their profession was not thoroughly understood, and their number was so extremely limited that but very little information can be obtained. Some recorded the Wabeno as a degraded form of the Mide. He furnished hunting medecine, love powders, and practised medical magic. By the use of his medicines he was able to pick and handle with impunity red hot stones, burning brands, and to bathe his hands in hot syrup. He was a dealer in fi e, and a handler of fire. He sought entrance into the Mide-wiwin and when admitted he became more of a specialist in the practice of medical magic and incantations.

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*The Mide-wiwin, or Grand Medicine Society.*—The origin of the Mide-wiwin, erroneously called the Grand Medicine Society, is buried in obscurity. It consisted of an indefinite number of practitioners of both sexes. Though the Society was graded into four separate and distinct degrees, it was generally thought that any degree beyond the first was a mere repetition. There was much reiteration in the ritual, but this was supposed to aid in impressing the candidate with the importance and sacredness of the ceremonies.

Birch bark records (plate 11) were preserved by the Mide priests or prophets bearing delicate incised lines to represent, pictorially, the ground plan of the number of degrees to which the owner was entitled. Such records or charts were very sacred and were not exposed to public view, being brought

No. 10.

INTERIOR OF MEDICINE LODGE.

forward only after an accepted candidate had attended to a very important matter, namely, the payment of his fee, and even then they were only produced subsequent to the necessary preparation by fasting and the offerings of tobacco.

The record was sometimes seven or eight feet long, consisting of sections that were fastened together at the top by being stitched with strands of basswood. At each end two strips of wood were secured transversely to prevent fraying of the ends of the record.

It is interesting to examine these charts. Two of them have been analyzed in a very interesting article by Hoffman, to which I am indebted for much of this information. (Seventh Annual Report, Bureau of Ethnology, Washington, 1885-6.) One of these is called the Red Lake Chart (plate 12), and the other the Sandy Lake Chart (plate 13).

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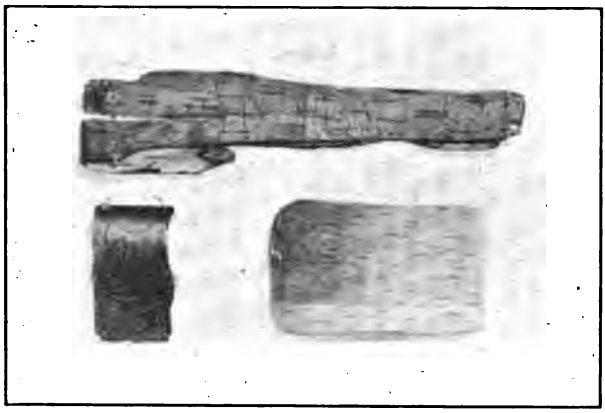
*The Red Lake Chart.*—In the Red Lake Chart the large circle at the right side of the chart denotes the earth as upheld by Minabozho. The other appeared at the square projection, Nos. 1, 2, 3, 4, the semi-circular appendages between these representing the four quarters of the earth. Nos. 9 and 10 represent two of the numerous malignant manidos or spirits who endeavor to prevent entrance into the sacred structure of the Mide-wiwin. The oblong colors, Nos. 11 and 12, represent the outline of the first degree of the society, while the inner lines correspond to the route that must be traversed by the candidate during initiation. Entrance to the lodge is directed towards the east, while the western exit indicates the way towards the next higher degree. The four human forms at Nos. 13, 14, 15



No. 11.

SACRED BIRCH-BARK RECORDS.

and 16 represent the four officiating Mide priests, or members of the faculty, whose services are always demanded at an initiation. Each of these is represented as having a rattle. Nos. 17, 18 and 19 represent the cedar trees, one of this species being planted near each of the outer angles of the Mide lodges. No. 20 represents the ground. The outline of the border at No. 21 represents the bear spirit, to which the candidate must pray, and make offerings of tobacco to compel the bad spirits to draw away from the eastern entrance to the Mide-wegan shown in No. 28. Nos. 23 and 24 represent the sacred drum which the candidate must use in chanting his prayers.

After the candidate has prepared to advance to the second degree, he offers three feasts and chants three prayers to the bear spirit, No. 22. At the entrance to this lodge of the second degree are five serpent spirits, Nos. 30, 31, 32, 33, 34, the evil manidos who oppose the candidate's progress, but it will be



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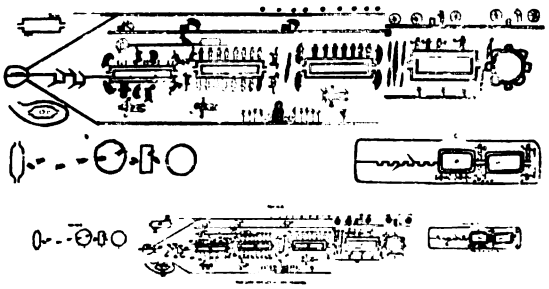
noticed that the four small serpent spirits move to either side of the path, while the large serpent, No. 32, arches its body in the middle to allow him to pass to the second degree. Nos. 35, 36, 46 and 47, are four malignant bear spirits who guard the entrance to the second degree and the exit from it. The form of this lodge is like the preceding one, but there are more priests assisting, as shown by figures Nos. 39, 40, 41, 42, 43, 44 and 45.

When the Mide is of the second degree he receives supernatural powers, as shown at No. 48. The lines extending from the eyes represent the ability to read futurity, the lines from the ears indicate that he can hear what is taking place at a great



No. 12.

RED LAKE CHART.

No. 13.

SANDY LAKE CHART. OJIBWA'S RECORD.

distance, the lines from the hands show that he can touch for good or evil friends or enemies who may be a long way off, while the lines from his feet denote his ability to traverse all space. The small disk upon the breast indicates that a Mide of this degree has had the migis or life shot into his body several times.

No. 50 represents a bad Mide who employs his powers for evil purposes. He can assume the form of any animal, and in this way can destroy the life of his victim. His services are in demand by people who wish to destroy enemies and rivals. He is in the disguise of a bear spirit whose footprints are seen at

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Nos. 51 and 52 at either side. The trees represent a forest, this being the location usually sought by a bad priest.

The candidate again crawls beneath the body of the serpent spirit, No. 54, when he is approaching the third degree. Two of the four panther spirits, guardians of this degree, are now awaiting him, Nos. 57 and 58. Spirits inhabiting the lodge are in this degree represented by Nos. 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75 and 76. After the candidate has passed through this degree he becomes a very skilled practitioner; his powers have been very much augmented, and he is represented at No. 77, with his arms extended, and many lines crossing the body, representing darkness and obscurity, and signifying his ability to grasp from the unseen world assistance to enable him to accomplish extraordinary deeds.

No. 14.

SHOOTING THE MIGIS.

The candidate enters the fourth degree by again using his sacred drum. The greatest spirit and the most powerful of the bad spirits now make a last effort to prevent his entrance at the door, No. 80. The chief opponents are the two panther spirits, Nos. 81 and 82, and the two bear spirits, Nos. 83 and 84. There are many other bad spirits around the structure who make a prolonged resistance to his entrance. The chief of the bad spirits are the bears, Nos. 88 and 96, and the panther, No. 91, and the lynx, No. 97. The outline of a human figure, No. 97, again expresses the power with which it is possible to become endowed after one has passed through the fourth degree. The spots placed on the figure 98 demonstrate that the body is covered with migis, or sacred shells that are symbolical of the Mide-wiwin. From the number of spots it is shown that the migis (plate 14) has been very frequently shot into his body

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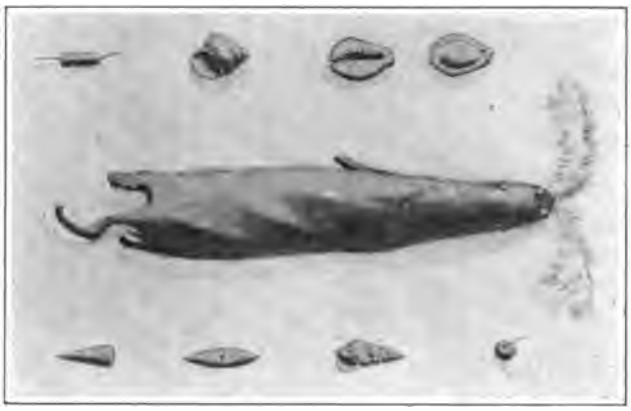
during the initiation and subsequent degrees, while the lines connecting them demonstrate that he is able to exercise all the functions of the different parts of his body. The Mide of the fourth degree is now able to accomplish the very greatest feats of necromancy and magic.

The rest of the chart indicates the devious paths that must be followed through life by the now fully-fledged doctor. The little scroll, No. 102, at the end, indicates that he has been a graduate for fourteen years.

*The Sandy Lake Chart.*—The chief points of interest in the Ojibwa's record, otherwise known as the Sandy Lake Chart, are that the spirits are represented as descending to the earth from the far off abode of Kitshi manido in the sky. The four lodges are present, and in them are granted the four different degrees. Each lodge has the posts, one in the first degree, two



No. 15.

SACRED OBJECTS.

in the second degree, three in the third degree, and four in the fourth degree, placed in position, and one of these posts is the sacred cross, at the foot of which is placed (figure 59) the sacred stone. The articles that are hung up are to represent the presents that must be given, or, in other words, the fees that must be paid by the candidate for his instruction. The priests are represented as using drums and rattles. The sacred objects are to be seen in plate 15. They represent shells that are used in the various degrees; one of these (No. 1) is very similar to the Cowrie. Another (No. 2) looks like a pearly-white Helix. The Mide sac represented in the centre is made of the skin of a mink; in it were carried the sacred objects belonging to the owner, such as colors for facial decoration, amulets, invitation sticks, etc.

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When a meeting was arranged for the purpose of initiating or passing a candidate, invitation sticks (plate 16) were sent to the neighboring medicine men.

The lodge in the first degree contained one sacred post, which was painted red, with a band of green around the top, and upon this was perched an owl (plate 17, figure 1 and 2).

In the second degree the lodge contained two sacred posts, the first of which was the same as that represented in the first

No. 16.

INVITATION STICKS.

degree, while the second was painted with white clay, bearing two bands of vermilion, one about the top and one near the middle (plate 17, figure 11).

In the third degree the lodge contained three sacred posts; the first was painted black, and upon this was placed an owl (plate 17, figure 3). The second was painted with white clay, and upon the top was the effigy of an owl, while the third was painted with vermilion, and it bore upon its summit the effigy of an Indian.

In the fourth degree the lodge contained four sacred posts; the first was painted white upon the upper half and green upon the lower half (plate 17, figure 8). The second was painted in a similar manner; the third was painted red, with a black spiral

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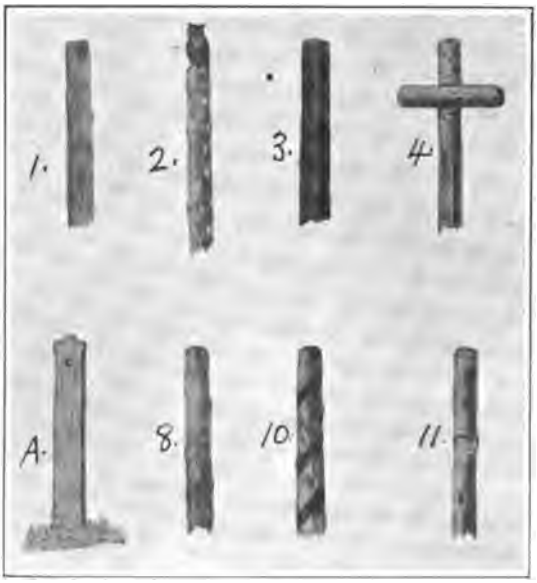
line extending from the top to the bottom, upon which was placed the owl (plate 17, figure 10). The fourth was a cross, the arms and part of the trunk of which were white with red spots, intended to designate the sacred migis. The lower half of the trunk of this post was cut square. The face towards the east was painted white to denote light and warmth (plate 17, figure 4). The face towards the south was painted green to denote the source of the thunder bird, who brings the rain and causes the trees and grass and flowers to grow. The face towards the west was painted red to indicate the line of the setting sun and the far-off abode of the dead; and, lastly, the face towards the north was painted black to indicate the direction from which comes all affliction, cold and hunger.




No. 17.

SACRED POSTS OF THE MIDEWIGAN.

In the fourth degree a sacred stone was deposited a short distance from the one entrance to the lodge, next to this was an area that was reserved in order that the applicant might deposit here his presents or, in other words, his fees. About ten paces to the east of the main entrance, in a direct line between it and the sweat lodge, was planted a piece of thin board the top of which was cut to represent a three lobed apex (plate 17 *a*). One side of this board was painted green while the side that faced the Mide-wiwin was painted red. Near the top was a small opening through which the Mide were enabled to peep into the

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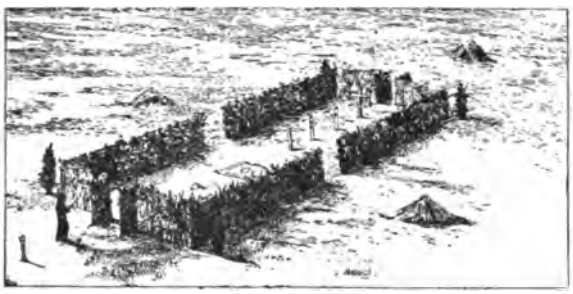
interior of the sacred structure in order that they might observe the angry spirits that were occupying it and opposing the intrusion of anyone not of the fourth degree.

The lodges always faced east and west, (plate 18). There were four openings to the lodge in the fourth degree, while in the other degrees there were only two. The cross in the fourth degree symbolized the four days of struggle at the four openings or doors in the north, south, east and the west walls of the structure. At each of these four openings Minabozho, or the great rabbit, appeared and shot charmed arrows into the enclosure at the horde of demons occupying the sacred place, and the bear spirit was the last of these to yield to Minabozho's superior powers. The equilateral cross, or the Greek cross, has become one of the sacred symbols of the Mide within and has special reference to the fourth degree. To the Dakotas it represented the four winds issuing



No. 18.

THE CROSS IN THE MEDICINE LODGE.

from the four caverns in which the souls of men existed before their incarnation in the human body.

*Facial Decoration.*—Certain facial decorations were adopted to distinguish the candidate during his progress in his studies (plate 19). The student who had obtained the first degree, or the first year student, was decorated with one strip of vermilion across the face near the ears and across the tip of the nose. The student who had obtained to the second degree was decorated with one strip of vermilion across the face near the ears and across the tip of the nose and another across the eyelids, the temples and the root of the nose. The student who had reached the third degree had the upper half of his face painted green and the lower half red. The students who had reached the fourth degree had the forehead and left side of the face from the outer canthus on the eye downward painted green, while four spots of vermilion were placed upon the forehead and four of the same color upon the green surface of the left cheek.

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The facial decorations varied according as the candidate subsequently became a priest or professor or remained just as an ordinary member of the society or an alumnus. In addition to this painting of the face the plumes of the golden eagle were worn upon the head and down the back, in the fourth degree, and they were painted red.

The above represents one of the methods of decoration adopted. There may have been several others in different localities similar but not exactly the same.

*The Ceremonies.*—The ceremonies for each degree were somewhat similar. When an Indian wished to be initiated into the order of the pow-wow, or grand medicine lodge, he paid a large fee to the faculty for his preliminary education. The faculty or priests of the Mide-wiwin were very careful to conceal

No. 19.

FACIAL DECORATIONS OF THE STUDENT OF MEDICINE.

from all except those initiated a knowledge of the plants that they used as medicines. In fact one of the chief objects they had in pulverizing the herbs after drying them was to prevent others from discovering their exact nature and oftentimes they added some other article to still further obscure their identity.

After the young medical student had paid his fee he was taken into the woods and taught the names and the virtues of the useful plants. He was then instructed how to sing the medicine song and how to pray the prayers to the manidos or gods whom

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the afflicted ones imagined they had offended. The second spirit or Dzhemanido was the guardian spirit of the medicine man, and he was second only to the first or the great spirit. To continue his medical education still further, the pupil had to pass through the four degrees of which we have spoken.

The membership of the grand medicine lodge was not hereditary. So closely were their secrets guarded that educated men, after great effort, could obtain but little information about them. An entrance into the lodge itself, during the ceremony, has sometimes been granted through courtesy, but those who were so introduced were by no means initiated into the mysteries of the creed nor made members of the society. These priests and priestesses constituted an order, and they were employed in all times of sickness. They occupied positions of conspicuous importance as they were supposed to have control over mysterious agencies and to be endowed with almost supernatural powers. While they were believed to be under the influence of the Great Spirit, it was also thought that they themselves had more or less control over other powers whose aid they could compel for weal or woe either upon friend or enemy. They could interpret signs of major or minor importance, could foretell the severity or mildness of approaching seasons, and pointed out the most appropriate time for the undertaking of expeditions of those engaging in war or in the chase.

These doctors, magicians, prophets, dreamers, or whatever the medicine man may be conceived to have been, were prepared then for their profession only after long and arduous training. The tests required for recognition as skilful practitioners were oftentimes severe and exacting, requiring great physical endurance and bravery of no mean order. The renown of these men sometimes spread to other tribes and nations. Young men seeking to become great prophets often travelled far for instruction by those who were great prophets.

When the prophecies of the medicine man failed the Indians attributed it to some neglect of the instructions given, and did not believe that it was due to any deficiency in the medicine man himself. When success was attained great honor was bestowed upon the prophet.

Henry writes, "Early on the 18th of May, 1801, we returned to Red River and found the Indians busy making the grand medicine ceremony that was performed by them every spring, when they met to admit some novice into the mysteries of this solemn affair."

Hoffman obtained much of his information owing to the fact that great areas of land that had been given to the Indians by the United States Government were being relinquished and the tribal ties that bound one tribe to another were broken up. The

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chief Mide priests were unable to continue the ceremonies any longer and they imparted to him a complete description in order that such a description might be transcribed and preserved for the future information of their descendants.

Paul Kane, in his "Wanderings of an Artist among the Indians of North America," on one occasion saw a medicine lodge erected in the centre of their encampment, and to it he at once directed his steps. It was rather an appalling structure, composed of poles that were bound in the form of an arch with both ends forced into the ground. This long arched chamber was protected from the weather by a covering of birch bark. On entering, he found four men, who appeared to be chiefs, sitting upon mats spread upon the ground and gesticulating with great violence and keeping time to the beating of a drum. Something that was evidently of a sacred nature was covered up in the centre of the group, and he was not allowed to see it. They ceased their pow-wow, or music, and seemed displeased at his entrance. The interior of the lodge or sanctuary was hung with mats constructed of rushes, and to these mats were attached various offerings that consisted principally of beads, red and blue cloth, calico, and the scalps of enemies.

Catlin writes, "My appearance here, owing to the operations of my brush as a portrait painter, commenced a new era in the Arcana of medicine. Both chiefs then walked up to me in the most gentle manner, in turn taking me by the hand with a firm grip, with head and eyes inclined downwards and in a tone, a little above a whisper, they pronounced some words and walked off. That moment I took the degree not of Doctor of Laws, nor of Bachellor of Arts, but of Master of Arts of magic and of hocuspocus, or the degree of the great white medicine man."

But, from what has gone before, we can readily see that neither Kane nor Catlin understood much about the great medicine man or his society of the Mide-wiwin. Among the medicine men in times past there have been some who were very celebrated. One of these was a Shawnee prophet Ten-squa-te-way, who was the brother of the great chief Tecumseth, and as great a medicine man as his brother was a warrior. He was blind in his left eye. In the portrait presented he is seen to be holding in his right hand his medicine fire and in his left his sacred string of beads. With these mysteries he went through most of the western tribes and enlisted warriors to assist his brother Tecumseth in the great scheme he had formulated of establishing a confederacy of the Indians intended to defend Indian rites and drive back the whites. He failed in giving much assistance, owing to the fact that two of his enemies followed him and denounced him as an impostor or quack. This was believed against him and he sank silently into disgrace.

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It was believed that medicine men were able to repel any foe to health until such time as the superior gods ordered otherwise.

La Hautau says that the jougleur is a sort of physician, or rather a quack, who, having been once cured of some dangerous distemper, has the presumption and the folly to fancy that he is immortal and possesses the power of curing all diseases by speaking to the good and evil spirits.

Father Hennepin looked upon the medicine man as the veriest quack. He says in one place, "It is impossible to imagine the horrible howlings and strange contortions that these jugglers make of their body when they are disposing themselves to conjure or raise their enchantments. They also pretend to physic and apply medicines that, for the most part, have little virtue in them."

"Now for medicines, or mysteries," writes Catlin, "for doctors, high priests, hocuspocus, witchcraft and animal magnetism. I spoke of "Eagle Ribs," painted in a splendid dress, holding the medicine bags of skins of otters, curiously ornamented with ermine and other strange things. Medicine here means mystery, and nothing else. Medicine bags are mystery bags. They are seldom opened, and are attached to some part of the clothing or carried in the hand. They are greatly respected, or even actually worshipped, and looked to for safety and protection."

A boy of fourteen or fifteen years of age was said to be making or forming his medicine. He wandered away from his father's lodge and absented himself for the space of two to four days. He lay on the ground in some secluded or remote spot and cried to the great spirit and fasted. The first animal, bird, or reptile of which he dreamt he regarded as chosen by the great spirit to be his mysterious protector through life. He then hunted and procured the animal and removed from it the entire skin. This he carried with him through life for good luck, and it was buried with him after death to conduct him safely to the beautiful beyond. It was a great disgrace to sell or give away a medicine bag. If lost in battle the owner lost with it the respect of the other men of the tribe until it was replaced. It could only be replaced by rushing into battle and taking the medicine bag from an enemy slain by him. The medicine thus obtained was of the very best variety.

We are told that we may imagine the Witch of Endor, or ghosts, or spirits, or furies of demonology, but that we must see a medicine man fitted out in all his strange and unaccountable coverings to form any just conception of his real frightfulness.

Certain charms were used, such as a pipe, curiously shaped stones and stuffed birds. Different medicine men evidently approached their patients in different manners. Sometimes the crouching position was taken, with a slow and halting

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step; in the one hand a frightful rattle, and in the other a medicine spear or wand. Sometimes he approached in jumps and bounds, with yells and groans, and crawled like the grizzly bear whom he represented on behalf of his patient, while meantime the patient was perhaps rolling and roaring in the agonies of death. The doctor jumped over his patient, pawed about him, and rolled him around from side to side. He bellowed like a bull, or hissed like a snake. The patient had his abdomen pressed in with fists or his chest walked over.

I find an instance related of a poor Indian who was ill with dropsy and in great pain. The medicine man held his hand over the fire until it was warm, then raised it over the body of the patient and moved it about mysteriously and rapidly as if he was suffering from delirium tremens. A pipe was then lit, from which two or three whiffs were taken. The stem of the pipe was raised towards the sun and then pointed towards the earth. The smoking was carried out in honor of both the sun and the earth. Then another whiff was taken, and the smoke was blown out over the body of the patient. It was supposed to be more efficacious if the stem of the pipe was broken off and the smoke was drawn out through the broken stem. The smoke was sometimes blown into the throat to relieve sore throat, and perhaps the smoke was blown into the ear to cure earache, though I can find no mention of this fact.

When the medicine man came to the dances he brought his armamentarium with him, and these articles made quite an exhibit. The charms used were peculiar objects, with which they touched the credulous patient who believed, as some do among civilized nations, in the laying on of hands. The charms were wrapped up in cloth or buckskin and put into boxes ornamented with beads.

Kane gives us some information regarding the medicine pipe stem, and the pipe stem carrier, who was elected every four years, and was not allowed to retain the distinction beyond that period. All were eligible for the position who had the means of paying for it. The expense was very considerable, as the new-comer had to buy out the practice of his predecessor to obtain the insignia of his office, that were frequently valued at from fifteen to twenty horses. The insignia consisted of a highly ornamented skin tent, in which the pipe stem carrier was expected to reside. A bear's skin was required, upon which the pipe stem could be exposed to view when it was found necessary to take it from its manifold coverings, and it was brought forth on such occasions as the calling of a council of war or the performance of the medicine pipe stem dance. When a quarrel occurred in the tribe the medicine man was called upon to bring forth his medicine pipe stem in order that the contending parties might smoke from it.

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Besides the articles already mentioned he had a medicine rattle, a wooden pail from which he took his food, and several other smaller articles. It required two horses to carry all his impedimenta when on the move. The favorite wife of the official usually carried the pipe-stem itself, and in this way was of great service to him. If, by chance, the pipe-stem fell on the ground many ceremonies were performed to bring back good luck. The carrier always sat on the right hand side of the lodge as you entered, and it was considered to be a mark of great disrespect if the visitor passed between the pipe-stem carrier and the fire. The official never condescended to cut his own meat; it was cut for him. One of his misfortunes in the presence of so many parasites was the fact that he dared not scratch his head without compromising his dignity. The pipe-stem, enclosed in all its wrappers, hung in a large bag on the outside of the lodge, and was never taken inside either by day or night, or uncovered in the presence of a woman.

In the councils of war and peace the medicine man had a seat with the chiefs, and was regularly consulted before any public step was taken, and the greatest confidence and respect was paid to his opinions. The Indian medicine man had a persistence that would have done credit to the modern doctor. He forced his attentions on the dying until, in despair, the poor sick one acquiesced in all his effusions in order that he might be rid of him. One observer says that he saw a blind man treated. He was struck on the head by the medicine man and asked if he could see. He naturally replied "No." He was again struck and asked if he could see, and by this time he had profited by his experience and said, "Oh, yes," and immediately it was considered that the medicine was all right.

The sick were sometimes trampled on, and considerable harm was done, but there were no lawyers and therefore no suits for malpractice.

A lady doctor, designated "She strikes the rider of the spotted horse," pressed her darling husband, who was sick, with her hands, and then stood on his chest and trampled on him. This was done in an endeavor to make him sick at the stomach, but, as it was not successful, it was tried again, and as a last resort a very vigorous stamp with one foot was administered. The patient gave a fearful moan as if he had been shot and life was found to be extinct, but in order to be sure of the effect, and to give him enough of the remedy, the trampling was continued. When the lady physician was finally satisfied that her husband was dead she and her lady companion in grief carried him to the burying-ground with great signs of mourning.

Another case is recorded in which the stomach of a dying patient was pressed on, in order that a snake that was supposed

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to be lodged there and was gradually working towards his heart, might be killed. The medicine man was satisfied that if the snake ever reached the heart it meant sure death.

Kane says that he saw a young Indian girl, the handsomest he had beheld, in one of the lodges. In the middle of the lodge sat a medicine man with a wooden dish filled with water before him. Twelve or fifteen other men were sitting around the lodge to assist in the cure of some disease affecting the girl's side. The officiating medicine man was in a state of profuse perspiration resulting from his exertions, and he sat down completely exhausted. A younger medicine man then took his place beside the patient, and began singing and gesticulating in the most violent manner, while the others kept time by beating on poles and drums. They were singing continuously. The younger doctor now darted upon the woman and took hold of her side with his teeth and shook her for a few minutes. The patient appeared to suffer great pain. He then relinquished his hold and cried out that he had got it, at the same time holding his hands to his mouth, after which he plunged them into the water in the bowl and pretended to hold down with great difficulty the disease that he had extracted. He held up something between his thumb and finger that looked very much like a piece of cartilage. One of the Indians sharpened his knife, divided the piece in two, and held one section in either hand. The one he then threw into the water and the other into the fire, and accompanied the action with a diabolical noise that none but a medicine man can make. The poor patient seemed to be unrelieved by the violent treatment.

It was believed that by drawing the figure of any person in sand or ashes, or in clay, or by considering any object as the figure of any person, a prick of this representation with a sharp stick or other substance would cause pain or injury to the individual represented.

## Indian Medicine.

*Indian Materia Medica.*—It is impossible to deny the fact that either by their discernment or the force of some unerring instinct, the Indians were guided to a knowledge of the good preparation of the medicinal plants that were indigenous to their respective sections of country, It was supposed that perhaps the long continued intercourse between the Indians and the Catholic Fathers, who were tolerably well versed in the ruder forms of medication, had much to do with improving an old and purely aboriginal form of practising medical magic. The whites knew but little of the materia medica of the Indians, owing to the fact that the knowledge was kept within the

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ranks of the mide wiwin. It has been stated that they had no remedies of any value that were not known and embraced in the Pharmacopeia of the United States. Surely this is saying a good deal, and is one of the greatest compliments that could be paid to their powers of observation.

Strange coincidences are found to exist. Many of the botanical remedies employed by the aborigines were the same as those used by educated physicians. From a very early day it has been supposed that the aborigines were skilled in their knowledge of botanical plants. They used aromatics such as the northern mint (*Mentha Canadensis*) and field thyme (*Thymus Serpyllum*). These were added to the water in which they washed, and to the oil with which they anointed themselves. The name *Mentha* is of mythical origin. According to the fable a nymph was transformed by Proserpine, the wife of Pluto, into a plant that now bears her name. The thyme is, no doubt, of the same family as the ancient hyssop, and perhaps identical with it, for we read in the Scripture, "Purge me with hyssop and I shall be clean." But it must be presumed that this passage referred to external cleansing. Hyssop or thyme has long been used as an aromatic to improve digestion. The odor resembles that of the lemon scented melissa.

Emetics and purgatives were the chief among the drugs used by them. The purgative used by the Dacotas was the large flowering spurge or milk purslain (*Euphorbia Corollata*). This is evidently the American ipecac of the herb doctors found in western New York, in Ontario, and southwestward to Alabama and Louisiana, and west to Kansas. It possessed emetic as well as purgative properties. A small portion of the root of this was eaten and the patient was forbidden to drink. They dried and preserved the plants they collected by hanging them up in bags that were made of animal tissue.

*Hygiene.*—Hygienic conditions were improved by the moving of the tepee from place to place. When the Indians began to live in houses no moving took place and filth accumulated. They were fond of athletics.

When the Indian was sick he only drank broths and ate sparingly. If he had the good luck to fall asleep he thought himself cured. He believed that sleep and sweating could cure the most stubborn diseases in the world.

*Epidemic Diseases.*—Epidemics occurred after their contact with the whites and measles and smallpox played sad havoc among them. Mumps were met with and erysipelas occasionally appeared in an epidemic form.

*Other Diseases.*—They were, in general, free from such disorders as dropsy, gout, or stone, while inflammation of the lungs and rheumatism were among their most ordinary com-

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plaints. Exposure to wet and cold, sleeping on the ground and inhaling the night air accounted for their liability to these diseases. White men similarly situated are prone to suffer from them.

Carbuncles were frequently met with.

Cancer was rarely found among the Indians.

*Diseases of the Eye.*—The Indians had strong eyes, but when he was forced to endure the glare of the sun on the snow for four or five months in the year he suffered from conjunctivitis. Tyrrell tells us that at the present day the Eskimos, in order to guard against the occurrence of snow-blindness, wear a very ingenious contrivance, in the form of wooden goggles. These are neatly carved so as to fit over the nose, and close into the sockets of the eyes. Instead of colored glasses, which the Eskimos have no means of getting, these goggles are made with narrow horizontal slits, just wide enough to allow the wearer to see through. Thus the excess of light is excluded, while the sight is not entirely obstructed. Conjunctivitis was also produced by the smoke in the lodges. Many of the Indians suffered from granular lids, but blindness was very infrequently met with.

*Fevers.*—Fevers were met with, but were not distinguished. As is well known, fever or elevation of temperature accompanies many diseases, and when this condition was found they gave an emetic, thinking that the stomach should be emptied in order that the nausea so frequently found at the commencement of these conditions might be relieved. The emetic used was the wild ipecac (*Euphorbia Ipecacuanha*), the boneset or the Canadian hemp (*Eupatorium Perfoliatum*). In the treatment of fevers they also relied very largely upon the use of the vapor or the cold bath. When it was not possible to give the patient a natural cold bath the wet pack was used by wrapping him in blankets and pouring cold water over him. The most common drink given to quench the thirst of fever patients was a decoction made of the root of a plant called the red root, or New Jersey tea (*Ceanothus Americanus*). The leaves of this plant were used during the American War of Independence as a substitute for Chinese tea, and in the Civil War it was employed in the same manner as a good substitute for poor black tea.

*Indigestion.*—Some of the Indians suffered a good deal from what was called *mal-de-boeuf*, produced by eating the meat of the buffalo bull. The meat was tough and leather like, hard to masticate, and difficult to digest. When the tongues of the buffalo were eaten this condition was not present.

*Consumption.*—In some places in which the evidences of tuberculosis have been found the climate is so dry that bodies laid on scaffolds, according to the burying rites, dried and dis-

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integrated without the usual evils of decomposition. For the relief of consumption they gave slippery elm, or an infusion made from the mucilaginous leaves of the velvet leaf (*Abutilon Avicenna*), and also from the common mallow (*Malva Rotundifolia*). It is not necessary for me to say anything further regarding consumption among them, for its ravages have become well known.

*Asthma.*—Asthma was occasionally met with, and for its relief they smoked tobacco and drank decoctions of sassafras and skunk cabbage.

*Pleurisy.*—This disease was met with. In the acute stage blood-letting was practised for its relief, and the skin was blistered with the juice of the mayweed or the wild chamomile (*Anthemis Cotula*). Internally, pleurisy root (*Asclepias Tuberosa*) was given. The pleurisy root was one of the milkweed family, the best known of which is the *Asclepias Cornuti*, or the common milkweed. The pleurisy this plant was credited to relieve was in all probability muscular rheumatism of the walls of the chest.

*Dropsy.*—For dropsy they gave the bark of the prickly ash (*Aralia Spinosa*), and accompanied its administration with a good hot vapor bath. The prickly ash is one of the ginseng family, the best known of which are the three-leaved and the five-leaved ginseng. The latter variety still brings a good price in China, where much of it is exported from this country.

*Mental Diseases.*—The Indians were peculiarly exempt from mental strain and its accompanying evils. Lunatics were met with and the tribes attempted to care for them. Insanity was not, however, very prevalent among them.

*Poisons.*—When it was thought that poison had been taken or administered, emetics were given to cure the sufferer. For snake bites, and the bites of venomous insects, each nation had a different treatment.

*Blood-letting.*—They were fond of blood-letting. Bleeding was such a favorite operation among the women that, according to Henry, they never lost an opportunity of enjoying it, whether sick or well. He says that he himself sometimes bled a dozen women in a morning as they sat in a row along a fallen tree. The operation was carried out by driving a piece of flint into the vein by giving it a sharp tap with a stick.

*Cupping.*—Cupping was performed by scarifying with a piece of flint. A horn was taken that had been cleaned out and perforated at the tip, and the large end placed over the scarified area. The air was then sucked out of the horn.

*Steam Baths.*—The steam bath seems to have been largely used. The women indulged in this luxury as much as the men. The sweating house was used by both of them as a house of prayer. They prayed loudly for themselves, and cursed their enemies.



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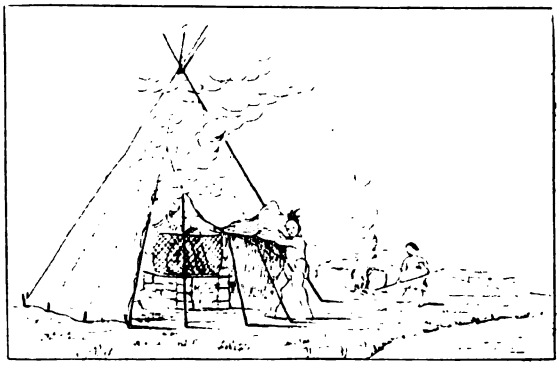
Sometimes, in cases of sickness, the steam bath was used to very great advantage, and again in other cases it did more harm than good. In every Mandan village a crib or basket, (plate 20), made in the shape of a bath-tub was to be seen. It was constructed by weaving together willow boughs, and was sufficiently large to receive a person in the reclining or recumbent posture. It was carried by the squaw to the steam bath or sudatory, when any one was about to take a bath, and it was then brought back to the wigwam after it had been used.

The bath house was built by placing skins that were tightly sewn together over a frame-work. In the centre were two walls of stone that constituted the furnace, while across from one wall to the other were placed a number of sticks, on which the bathing crib was rested. Hot stones were brought in from a fire conveniently situated near the lodge, by the squaw, and



No. 20.

SWEAT BATH OR SUDATORY.

water was poured over them to raise a profuse steam. The lodge was now kept tightly shut, and the bather, lying on the willow crib, quaffed this delicious and enervating draught with long drawn sighs and extended nostrils until he became drenched in a profuse perspiration. At a given signal from him the lodge door was opened and he plunged headlong into the river for an instant, and then, putting his robe around him, ran home to dry himself and to sleep, wrapped up closely in his buffalo robes.

Another form of the sweat bath is described by Schoolcraft (plate 21). A hole was dug in the ground, into which stones were put. A small fire was kindled about them to heat them, and over them some sticks were placed that were fastened in the ground at each end, forming the frame-work of a miniature

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tent. Over these poles a blanket was thrown, and the patient got under this tent and steamed himself by pouring water very gradually upon the hot stone heap.

Still another variety of sweat bath was in use. A log heap was burned on a selected spot. While the earth was hot an excavation was made large enough to receive the body of the patient. He was laid in this excavation with enough clothing on to absorb the perspiration. This clothing was covered over with hot earth while the head only was left out above the surface.

These sudatories were resorted to as a luxury for giving freedom and vigor to the faculties of the mind at times when deliberation and sagacity were called for, and also in sickness. If a sudatory was prepared for a guest it was an evidence that every assistance was to be given to his judgment; if the suda-

No. 21.

CROW INDIAN SWEAT TEEPEE.

tory was refused it manifested a desire to take an unfair advantage of him. Under the latter circumstances they generally offered him alcohol.

The Indians said that they took sweat baths to make them more alert in the pursuit of an animal that they desired to kill.

## INDIAN SURGERY.

*The ambulance or travois* (plate 22). The Indian ambulance, or travois, was a remarkable conveyance used to carry the wounded, during a battle, out of the reach of harm. The comfort of this mode of conveyance was greater than would appear at first sight. With it they transported the wounded to the home camp. Litters were also made by lashing together two

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poles with cross pieces and filling up the intervening space with bark. The wounded were placed upon these frames and carried off the field on the shoulders of four men.

### Treatment of Wounds.

It is said that the Indian cannot bear the loss of as much blood as the white man. The skill of the Indian in treating wounds appears to have consisted in a very close attention to the injured part, and the frequent applications of washes and poultices, and, further, to the fact that they kept the part clean. Wounds were brought together with sutures made of the inner bark of the basswood or the fibre of the long tendon taken from the leg of the deer. The sutures were left in until the sixth day, when they were removed. After this time the parts were washed with a mucilaginous decoction prepared from lichens or from slippery elm.

No. 22.

CROW INDIAN AMBULANCE OR TRAVOIS.

Alexander Henry says that, in regard to flesh wounds the Indians certainly affected some astonishing cures. The injuries inflicted were those produced by the war club, the tomahawk, the knife, and the bow and arrow, and in later years those produced by firearms.

He saw at Sault Ste. Marie a man who, as the result of a quarrel, received the stroke of an axe in his side. The blow was so violent, and the axe was driven in so deeply, that the wretch who held it could not withdraw it, but left it in the wound and fled. A medicine man arrived and took from his bag a small portion of a very white substance resembling a piece of bone. This he scraped into a little water, and, after

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forcing open the jaws of the patient with a stick, he poured the mixture down his throat. The wounded man soon opened his eyes and became sick at the stomach and vomited. The medicine man now examined the wound, from which he could plainly see the breath escaping. This, no doubt, was not the breath, but was the air being drawn back and forth into the abdominal cavity. The omentum was found protruding and was cut away. The portion cut away was eaten by the men. After six days the patient was able to walk about; within a month he was quite well, except that he was troubled with a cough. He was living twenty years afterwards.

A chief was stabbed in a quarrel, and the wound was a very large one, and opened up the chest. After a very violent fit of coughing part of the lung protruded, but this protrusion acted very well and stopped the hemorrhage. The medical practitioner of the village was much puzzled, and he called another medicine man to give him advice, when it was decided to remove the protruding portion of the lung and deal with the removed portion in the usual way by eating it. After a time the portion of the lung in the opening sank back, the skin healed over, and the chief was once more restored to health.

In a conflict with a grizzly bear a terrible injury was inflicted on the face. The eye was destroyed and a portion of the cheek bone removed. The other paw of the bear made two openings into the left half of the chest. When the man was discovered he was supposed to be dead. He was carried to his lodge, placed on the wounded side so that good drainage could be effected, and the wounds were faithfully washed with mucilaginous decoctions. In a few months he was well.

*Gun-shot Injuries.*—Gun-shot wounds were cleansed by injecting, with a quill and a bladder fastened to it to make a syringe, vegetable decoctions into them. An effort was made to keep up suppuration, and the external opening was not allowed to close prematurely. To keep the wound open it was packed with the bark of the slippery elm, which is soft and mucilaginous and makes an admirable pack. Great attention was given to these wounds, and to this fact the success was mainly due.

Arrow-heads and bullets were removed by means of an instrument that was made as follows (plate 23). A willow stick was procured and cut exactly in half by splitting it down the centre; the pith was then removed and the inside was smoothed off and the ends rounded, narrowed and pointed. One end was inserted above the arrow-head and the other below it, and then the two sticks were bound tightly together to keep them firmly secured against it. Traction was then used and the foreign body successfully removed. The piece of split willow acted like a pair of modern bullet forceps.

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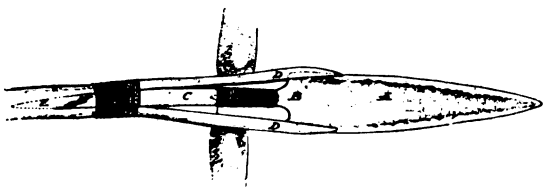
*Trephining.*—The skull has been trephined by savages for the purpose of allowing the escape of an evil spirit that could not be dislodged by ordinary exorcism. It is practised to this day by the South Sea Islanders, and by some of the Arab tribes of Algeria, but I cannot find that it was practised by the North American Indian medicine man. In America only one skull has been discovered that showed evidence of prehistoric trephining. This skull was that of one of the Incas, and was found in Peru. In the Island of Ewea, in the Loyalty group, according to Martin, nearly all of the male adults have this hole in the cranium. The operation seems to have been performed upon them for the relief of convulsions in infancy or childhood.

*Fractures.*—For the treatment of fractures they made splints out of the bark of trees. The bark was adapted to the limb and fastened to it to prevent any motion at the ends of the broken bone. Deformities often followed such treatment. They were evidently unacquainted with the use of extension in the treatment of fractures.



No. 23.

THE EXTRACTION OF AN ARROW HEAD.

*Amputations.*—The Dakotas laughed at the folly of amputation. Some of them would rather have died than to have had it done. There seems to have been a prejudice against amputation, and I cannot find that it was adopted as a practice.

*Hernia.*—When a hernia was found to be strangulated, nothing was done to relieve the condition. To keep up simple ruptures they applied a bandage and used compression.

*Aneurism.*—Aneurism was evidently a very rare disease among the Indians. I find no reference to any form of treatment adopted for the cure of aneurism.

*Ulcers and Burns.*—The Dacotas treated ulcers and sores by dusting on them the dry pulverized root of the butterfly weed or pleurisy root (*Asclepias Tuberosa*). In other tribes a powder made by pulverizing the root of the sweet flag (*Acorus Calamus*) was used. Poultices were often applied to ulcers and the ulcers were frequently cauterized with a red hot iron.

Burns were treated by placing over them pieces of the inner bark of some species of pine that was boiled until it was soft.

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The boiling must have extracted most of the turpentine present and the substance thus applied acted as a protective.

And now in conclusion let me say that our profession is even yet bound down by the conjectures of the past and that we, like the Indian tribes, have a certain amount of fetich worship. We are gradually eliminating much that is conjectural and it will be a great step in advance when nothing that is not actually known is taught to the student of medicine. Theories should be proved and thus be made facts, or they are of little practical value. Theories may be used to pad book covers, where they serve a certain purpose, just as did the incantations and jugglery of the steam bath.

Charles Darwin is an object lesson to everyone who has matriculated in medicine. The accuracy of his observations founded his immortal greatness. He disposed of theories, not by substituting other theories for them, but by displacing them entirely, and this he accomplished by studying, by thinking out, by understanding the changes that took place in plant and animal life, so that he was able to demonstrate these changes to others who had been surfeited with the wisdom of their own theories, but who had not put into practice or else had not been endowed with sufficient powers of observation.

As a profession, we can alleviate suffering, we can assist nature, but we cannot prevent death. With our increased knowledge we can save many lives that a few years ago were lost. We can recognize disease more readily than we could a few years back, and we understand the nature of many diseases that were not understood, and before many years we will understand the nature of some diseases that are not understood as yet. Physiological experiment and study of pathology are our two sheet anchors. They have already raised us far above the juggling medicine man, but we have much to rearrange. Our pharmacodynamics is almost as unscientific as that of the savage and we worry our students with a great deal that is valueless contained in our pharmaco-poeia. Their time would be spent to greater advantage in the practical study of physiology and physiological chemistry. The man who can estimate the immense benefits that will accrue to the human race from such continued progress must indeed be a great prophet.

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# Progress of Medical Science.

## OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD, K. McILWRAITH, AND HELEN MACMURCHY.

### The Perils of the Curette and Uterine Catheter.

A recent article by Dr. Mauclaire (*Annales et d'Obstétrique*, February,) deserves the attention of every practitioner. "Minor gynaecology" has long ceased to be a reproach, but the simplest operations on the uterine cavity are never without peril, even when certain well-known precautions, seldom neglected, are observed. In Paris great advances have been made in the practice of obstetrics and uterine therapeutics, yet Dr. Mauclaire has had to intervene three times within a few months in cases of "gynaecological" perforation of the uterus. The first patient had aborted at the third month; three weeks later the curette was used in a great Parisian hospital be it remembered. The instrument suddenly went through the fundus; the scraping was at once discontinued and a plug of gauze passed into the uterine cavity. Six hours later the patient was in a state of collapse from acute septic peritonitis. Supravaginal amputation of the uterus was performed and the peritoneum drained through the vagina, but the patient died in twelve hours. The uterus had been perforated through a suppurating focus in its walls. The second patient was in another great hospital in Paris when the curette was used to remove some retained products of conception. It suddenly perforated the uterus, and the cavity of that organ was at once plugged with a strip of gauze. The case was watched, septic symptoms were very distinct at the end of twenty-four hours, therefore Mauclaire operated. The perforation was closed with two deep catgut sutures, and as the right appendages were inflamed they were removed. The pelvis was drained after Mikulicz's method; recovery was speedy. In the last case the patient had septic symptoms beginning twelve days after a normal labour. A doctor called in by the midwife employed intrauterine douches, making use of Doléris's metal dilating catheter, the tampon being inserted after each daily douche. At the end of a fortnight, during the douching, the patient fainted, then it was found that the catheter had passed far through the uterine walls, whilst the fluid, a solution of cresyl, did not return. The patient was sent into hospital, but the history of the case was

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not known until the next morning. Mauclaire operated twenty-four hours after the accident; he performed a supravaginal hysterectomy, drained the cervical canal, and packed the pelvis with gauze, the drain opened through an incision in each groin. The patient, however, died seventeen hours later. Dr. Mauclaire adds two cases in his experience last year (making five in all) where the puerperal uterus had been perforated, and most probably after or during an illegal operation. Both underwent supravaginal hysterectomy and packing of the pelvis with aseptic gauze. The first died, but she was sinking from acute anæmia as well as sepsis when admitted into hospital, the second was saved. These cases are instructive, as it shows that perforation may occur even when instruments are used by experts with all the advantages of appliances and nursing at a metropolitan hospital. The conscientious practitioner employing the intrauterine douche in a septic midwifery case may meet with the same accident. It is not only the abortionist, eager to scrape away at once all incriminating products of conception, who is likely to perforate the uterus. Further comment is needless, but the perils of intrauterine "minor" surgery must never be forgotten. Perforation by the sound in a non-gravid uterus is seldom followed by bad results, though some authorities suspect that in some cases so styled the sound has passed along the canal of one Fallopian tube so that no wound has been inflicted; still, the sound as an instrument used for diagnosis is not without grave disadvantages. About the treatment of sepsis after perforation there is much difference of opinion; many authorities distrust supravaginal hysterectomy, as the cervix left behind is probably septic.—*Brit. Med. Jour.*

**Ectopic Gestation. Lithopedion found after thirty-three years.**

L. B. R. was born in New York, September 6, 1828. Her family history is good. Measles in childhood left a cough, which persisted through life. Menstruation began at about 14 years. At 16 the contraction of a "cold" during a menstrual period brought on dysmenorrhea, from which she afterward suffered. Her periods were regular. She attained a stature slightly above the average. She was married at 23. She first became pregnant 13 years after marriage (in March, 1865). The usual signs of pregnancy were present, and quickening occurred about the fifth month. Except for the continuation of the monthly periods, gestation was considered normal. Labor began about the expected time (December, 1865), and continued about 36 hours, when there was a complete abeyance. About a week later vigorous fetal movements were noted, which suddenly disappeared and never returned.

Abdominal enlargement persisted for 12 or 15 years, then began to diminish, but never entirely disappeared.

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Upon her death (in October, 1898, almost 33 years after the futile labor noted) I removed a lithopedion occupying the right tube, which was not ruptured. The whole fetus is 7 x 4 x 3 inches, and weighs four pounds.—E. E. Evans, M.D., of Lawrence, Kan., in *American Medicine.*

### A Case of "Dissecting" Puerperal Metritis.

Dr. V. I. Polkanoff (*Roussky Vratch*, November 2nd) describes a case of rare type of metritis which occurred in a puerperal woman, aged twenty-two years, a primapara, who was brought to the hospital in the midst of attacks of eclampsia after a labor lasting fifteen hours. The child was delivered with forceps, a complete laceration of the perineum resulting from the extraction. On the fifth day a marked enlargement of the uterus, and a foul odor of the lochia were noted; there came a rise of temperature and of the pulse, and the other symptoms of puerperal metritis. On the thirty-first day after the labor, there came out of the cervix a piece of the affected uterus in the form of a mass of uterine tissue of irregular shape, covered by peritoneum. Most authorities state that it is impossible to make a diagnosis of dissecting metritis before the piece of uterus is expelled. Garrigues, however, states that in such cases the uterus remains high, does not contract after labor, and there is an edema of the external genitals. Beckman confirms the observations of Garrigues in this respect. Most cases reported have ended in recovery, but death took place from sepsis in 27.5 per cent. of cases, according to Beckman. Recovery is due to the formation of adhesions of peritoneum about the opening in the uterus. The treatment of this affection is chiefly expectant, and should be limited to rest in bed and antiseptic vaginal douches. All forcible attempts at removing the gangrenous portion of the uterus should be avoided.—*N. Y. Med. Jour.*

### No Essential Fever of Pregnancy.

Pinard (*Ann. de Gyéc et d'Obstét.*, March, 1903) absolutely denies the existence of the fever of pregnancy described by Burns, of Glasgow, in 1809. Tarnier and Budin admitted that fevers in pregnant women offered no characteristic symptoms, they must therefore be most probably multiple. Vinay in 1894 showed how modern experience had proved that pregnancy plays an entirely secondary share in the production of the fevers with which it is sometimes associated. Pinard insists that there is distinct danger in maintaining a belief in an essential fever of pregnancy. It may cause the medical attendant to overlook many conditions little known in the days of Burns, such as appendicitis, torsion of ovarian tumors, and dilated tubes,

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cholecystitis and other diseases, which often complicate pregnancy, and involve rises of temperature. When such a rise occurs, the cause, which is never the pregnancy as such, should be sought for. In the course of 1902 Pinard observed many "temperatures" in pregnant women under his care in the Clinique Baudelocque, many of the patients were nearing term, but some were in very early pregnancy. One woman had distinct fever in the fourth month, and the cause was not clear, apparently there was no local tenderness. An exploratory incision was made, and an ovary full of pus was detected and removed. "That's what her 'fever of pregnancy' meant," concludes Pinard.—*Brit. Med. Jour.*

**Ectopic Gestation—Twin Pregnancy.**

Ersilio Ferroni reports a case of twin pregnancy in the *Zentralblatt für Gynäkologie*, February 28, 1903. In the third month of gestation left ovariosalpingectomy was performed. The tube removed contained two fetal sacs apparently unconnected, and the portion of the tube between them in a normal condition, but both openings were stopped with blood clots. The two fetal sacs were unequal in size, and showed different stages of development. It appeared that in the larger sac abortive changes with the death of the embryo had occurred while the other advanced to a later stage of development before a fresh lesion led to further abortive changes and symptoms requiring operation. The question whether both ovums came from the same or different ovaries at different times is also discussed. The symptoms of the patient were those of an ordinary ectopic gestation, and it was only the anatomic examination which made known the existence of a twin pregnancy.

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# Editorials.

## RECIPROCITY IN MEDICAL DEGREES.

Much to be regretted is the defeat in the Quebec Legislature of the bill to give effect to Dr. Roddick's proposition relating to the recognition in other parts of the Empire of medical degrees conferred in Canada. It has been a long standing complaint that Canadian medical men cannot practice in Britain or on ships of British register. The reason assigned for the prohibition is the fact that a Canadian doctor is not free to practise in Canada except in the province in which he is licensed. If we had a broader system here a like system would prevail in the wider arena. To meet the case a measure looking to registration for Dominion purposes was passed on Dr. Roddick's initiative at a recent session of the Dominion Parliament. Seeing that the legislation dealt with a provincial issue it was made subject to provincial acceptance or to ratification by the various Legislatures. All favored it, and the question of endorsing it and making it operative depended upon the action of the Quebec House. There it has been defeated by a large majority. The reason assigned for its rejection is its alleged interference with provincial rights. But this is illogical. It was in order to prevent interference with provincial rights that it was submitted to the Provincial Assembly. If adopted it is adopted with provincial concurrence, and the provincial right is sustained. There can be no interference with provincial rights if the legislation is endorsed by the province. The only argument upon which the objection from the point of view of autonomy can be raised is such as is to be derived from the fact that under reciprocity in medical degrees a practitioner from one province may pursue his profession in another without submitting to local examinations. But this is not an argument that will hold good save in a very small portion of Quebec, namely, that in which English is the language of the people. The vast majority of the Quebec people must have French-speaking doctors, and as a consequence the invasion of provincial rights under reciprocal legislation is not likely to be so

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marked in that province as in the English-speaking parts of Canada. If the English-speaking provinces do not object to a broader system, Quebec certainly should not, for it has the least to fear from such a change. The rejection of the bill is to be regretted. But possibly upon giving the question closer consideration the Legislature will be prepared to act differently at its next session.—*Mail*, April 21.

## THE ONTARIO MEDICAL ASSOCIATION.

The next meeting of the Ontario Medical Association will be held in Toronto, June 16, 17 and 18, under the presidency of Dr. J. C. Mitchell, formerly of Enniskillen, but now one of the physicians to the Asylum for Insane, Toronto. As mentioned in a former issue the Committee on Papers and Business under the chairmanship of Dr. W. P. Caven, has about completed its work. Correspondence with members in different parts of the province is still going on, and it is expected that a full programme will be issued the first week in May.

Among the contributors outside of Ontario will be Dr. Musser, of Philadelphia and Dr. Thos. S. Cullen, of Baltimore, who will read a paper on "Uterine Myomata and their Treatment."

There will be a discussion on Arteriosclerosis in which the following will take part: Pathology, Dr. H. B. Anderson, of Toronto; Cardiac, Dr. J. W. G. McKay, of Oshawa; Cerebral, Dr. Hugh McCallum, of London; Ophthalmology, Dr. J. C. Connell, of Kingston; Therapeutics, Dr. J. L. Davison, of Toronto.

Dr. Jas. F. W. Ross will read a paper on "Surgical Treatment of Septic Peritonitis." Mr. Wm. Riddell, Legal Lecturer on Medical Jurisprudence in the University of Toronto, will read a paper on "The Medical Witness under Cross Examination. The following physicians will also read papers: Dr. Frank McConnell, of Los Cruces, New Mexico; Dr. Perry Goldsmith, of Belleville; Dr. C. D. Parfitt, of Gravenhurst; Drs. W. B. Thistle, R. D. Rudolf, A. McPhedran, Wm. Oldright, G. H. Burnham, G. Silverthorne, A. Primrose, John Amyot, Geo. A. Bingham and Adam Wright, of Toronto.

The Committee of Arrangements, under the chairmanship of

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Dr. Bruce Riordan, has about completed its work. The meeting will be held in the Normal School Building, St. James' Square. There will be a smoking concert on the evening of Tuesday, the 16th, probably in St. George's Hall, Elm Street, and a luncheon probably in the new King Edward Hotel on Wednesday, the 17th. There will also be an exhibition of medical and surgical appliances and pharmaceutical preparations.

## ISOLATION OF SCARLATINA PATIENTS.

The scarlatina regulations recently passed by the Provincial Board of Health are being subjected to a great deal of hostile criticism. According to these regulations all patients suffering from scarlet fever must be isolated and removed to buildings or tents specially prepared for them. The lay papers are taking the matter up, and some of them state that any regulation which compels the authorities to take a child from its mother and remove it to a tent, especially in winter, is nothing short of inhuman. We understand that certain mutual benevolent societies have been discussing the regulations, and one at least, as we learn from the Toronto *Evening Telegram*, has taken decided action.

One of the Courts of the Canadian Order of Foresters has passed the following resolution and forwarded it to the Mayor and Medical Health Officer of Toronto:

"Whereas, by recent regulations issued by the Provincial Board of Health regarding scarlet fever, those inflicted with this disease are to be isolated;

"And Whereas, scarlet fever is more particularly a child's disease;

And Whereas, if the said regulations are carried out, children will be removed from the care of their mothers, who are their best attendants, physicians and comforters;

"And Whereas, we believe the mother can and will give better care, treatment and attention to her children than a stranger can or will give during the period of isolation;

"Therefore, be it Resolved, that we, the members of Court Occident, Canadian Order of Foresters, protest against the removal of children having scarlet fever from the care, treatment,

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attention and companionship of the mother, whom we believe to be the best person to look after and attend to her children;

"Further, be it Resolved, that we request the proper civic authorities to seek to have these regulations of the Provincial Board of Health as to scarlet fever revoked and annulled;

"Further, be it Resolved, that we send a copy of this Resolution to the Secretary of the Provincial Board of Health, the Medical Health Officer of the city of Toronto, and the Mayor of Toronto. Dated this 6th day of May, 1903."

At the meeting of the Reception and Legislation Committee of the Toronto City Council, held April 11th, the following resolution was passed:

"That this committee places on record its protest against the regulations adopted by the Provincial Board of Health on February 12th last, and made an Order-in-Council on March 5th last, whereby any one suffering from scarlet fever is placed in an isolation hospital or tent, giving neither the physician in charge nor the Medical Health Officer any opinion as to the effectiveness of the isolation of the case at their home, nor of the safety or danger with which the patient might be moved, and which, in our Canadian winters and with this disease, would under certain conditions of the patient be extremely dangerous to life. Moreover, the forcible separation of mother and child under all conditions of this disease is a violation of personal and family rights which the circumstances do not warrant, and the knowledge of this forcible separation will defeat the very object for which the regulation is intended, by (1st) causing the parents to avoid calling in proper medical advice when a child has only a slight rash, for fear of it being pronounced scarlet fever, and (2nd) physicians will be very loth to report and will avoid making a diagnosis of scarlet fever if they can find any reasonable excuse for so doing. Thus many of the very simple cases that are now diagnosed and isolated will, under the present laws, not be reported nor isolated at all. This committee believe that the Medical Health Officer, Dr. Sheard, is carrying out isolation in cases of contagious diseases as effectively and thoroughly as it can be done at the present time. We recommend the adoption of this resolution by the Council at its next meeting."

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## THE MODERN MATERNITY HOSPITAL.

Dr. Barton Cooke Hirst, of Philadelphia, in an address delivered before the Philadelphia Obstetrical Society on the above subject, gives an account of the new building for the Maternity Department of the University of Pennsylvania Hospital in Philadelphia (*American Medicine*). This part of the hospital contains fifty beds and an operating amphitheatre, fully equipped. Provision is made for privacy and isolation of the patients, so that thorough instruction of students is secured without undue exposure of the patients. Dr. Hirst states that no patient leaves the institution "with any disease or abnormality of the pelvic or abdominal organs which follows or complicates parturition." The aim of those in charge is to have each patient leave the maternity hospital in as good or in better condition than she entered it. Dr. Hirst also states that there are three kinds of specialists in America competing for the surgical treatment of diseases of women: the general surgeon, the gynecologist, and the surgeon who is trained in both obstetrics and the diseases of women. He appears to think that eventually the work to which he refers will gravitate into the hands of the "specialist who has had adequate training in both branches of gynecology, who must recognize and treat all the diseases of women in all their steps, whose work demands a training in abdominal and pelvic manœuvres, diagnosis and treatment of every kind." He concludes by saying that such is the decision which has already been reached in the Teutonic, Scandinavian and Slavonic countries of Europe.

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## THE RICHARDSON TESTIMONIAL.

The committee in charge of the banquet and presentation of the portrait to the University of Toronto received the following letter from Dr. Richardson:

"36 ST. JOSEPH ST., April 20th, 1903.

"*The Chairman of the Presentation Committee.*

"DEAR SIR,—Please convey to the committee my heartfelt thanks for their exertions which resulted in the banquet on Wednesday. The attention shown Mrs Richardson gave her the greatest pleasure, and were especially appreciated by myself. I regret that I was so surprised, as I had not had the slightest intimation of its preparation; that when the address, so beautifully illuminated, was handed to me, I had not the presence of mind to allude to it when I spoke. It will be a cherished heirloom, to be kept as a memorial record of the results of my life's work. The affectionate terms in which you allude to me in the address, fill me with gratitude, and will cheer me through my declining years. I hope there may be an opportunity of conveying my warmest thanks to the numerous pupils who contributed so generously to the expenses of the portrait, the banquet and the address.

"Your highly honored and grateful teacher,

"(Signed) "JAMES H. RICHARDSON."

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At the recent Congress of American Physicians and Surgeons held in Washington, Dr. Allen Baines, of Toronto, was elected Vice-President of the American Pediatric Society.

Dr. Alan B. Greenwood (Tor. '95) has removed from Sutton to Moose Jaw, N.W.T., where he has commenced practice.

Dr. John S. Hart, (Tor. '89) of Toronto was married, May 14th, to Miss Jean Lawson.

Dr. C. D. Parfitt, (Trin. '94) who was in excellent health during the past winter, has a slight relapse of his old trouble, and has given up active work for a time. He will spend the summer at Gravenhurst.

Dr. H. S. Hutchison (Tor. '00) has been appointed to temporarily fill Dr. Parfitt's place in the free Sanitarium for Consumptives, Gravenhurst.



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# Personals.

Dr. King Smith, of Toronto, visited Cornell in April.

Dr. Silverthorne has removed to 266 College Street.

Dr. Thos. H. Balfe left Hamilton for Europe, April 23rd.

Dr. Robert T. Noble, of Toronto, has removed to 74 Gerrard Street E.

Dr. Algernon Temple has removed to his new house on Bloor Street West.

Dr. J. Ephraim Elliott has been appointed associate coroner for Toronto.

Dr. H. E. Roaf (Tor. '02) is a Colonial Fellow at University College, Liverpool.

Dr. Wm. Goldie, of Toronto, spent a week in New York from May 9th to 16th.

Dr. H. T. Machell, of Toronto, spent a week in New York during the latter part of April.

Dr. W. H. B. Aikins went to New York May 2nd, and returned to Toronto May 10th.

Dr. Jas. F. W. Ross, of Toronto, left for a two weeks' sojourn in North Muskoka, May 11th.

Dr. Chas. J. Hastings, of Toronto, left for Baltimore May 8th. He expected to return May 18th.

Dr. E. N. Coutts (Tor. '00) is surgeon-in-charge of the mining camp at Obnassi, Gold Coast, West Africa.

Dr. Colin C. Campbell (Tor. '01) has been appointed house surgeon in the Royal London Ophthalmic Hospital, England.

Dr. G. W. Badgerow (Tor. '94) has been appointed to the clinical staff of the Golden Square Throat and Nose Hospital, London.

Dr. Lorne F. Robertson, of Stratford, after being engaged in post-graduate work in London for a year, is now *walking* the hospitals, and taking certain special courses in Germany.

Drs. A. McPhedran, J. J. Mackenzie, A. H. Garratt, Price Brown, Allen Shore, Allen Baines, W. P. Caven, B. E. McKenzie and Chas. J. Hastings, of Toronto; Dr. Cummings, of Hamilton; Sir William Kingston, Drs. Stewart, Blackader and Hutchison, of Montreal; Drs. Hugh McCallum and Hodge, of London; attended the Congress of American Surgeons and Physicians at Washington, May 12th to 15th.

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# Obituary.

## ROBERT COTTON, M.B.

Dr. Cotton, of Regina, N. W. T., died May 6th, of pneumonia, aged 48. He was graduated, M.B., from the University of Toronto in 1881, and the following year went to Regina where he practised continuously up to the time of his fatal illness. He was a b other of Dr. Jas. H. Cotton, of Toronto.

## HON. DAVID MILLS, LL.B., K.C.

Hon. David Mills, one of the Justices of the Supreme Court of Canada, died suddenly at Ottawa, May 8th. For many years he was known as one of Canada's greatest statesmen and jurists. He was for a time a member of the Senate of the University of Toronto and also Legal Lecturer in Medical Jurisprudence in that institution.

## SAMUEL BRIDGLAND, M.D., M.P.P.

Dr. Bridgland died at his home in Bracebridge, May 6th, of Bright's disease, aged 55. He received his medical education at Jefferson Medical College, Philadelphia, and Queen's University, Kingston, and was graduated from the latter in 1870. He at once settled in Bracebridge and practised there until his last illness which became acute a few months ago. He was very successful in practice, and being a man of broad sympathies and kindly manner was everywhere beloved and universally popular. He was a prominent Liberal in politics, and was twice elected as representative to the Ontario Legislature—in 1898 and 1902.

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# Book Reviews.

**A Text-Book of Legal Medicine and Toxicology.** Edited by FREDERICK PETERSON, M.D., Chief of Clinic, Nervous Department of the College of Physicians and Surgeons, New York, and WALTER S. HAINES, M.D., Professor of Chemistry, Pharmacy, and Toxicology, Rush Medical College, in affiliation with the University of Chicago. Two imperial octavo volumes of about 750 pages each, fully illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Per volume: Cloth, $5.00 net; sheep or half morocco, $6.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

This work presents to the medical and legal professions a comprehensive survey of forensic medicine and toxicology in moderate compass. For convenience of reference the treatise has been divided into two sections, Part I. and Part II., the latter being devoted to toxicology and all other portions of legal medicine in which laboratory investigation is an essential feature. Under "expert evidence" not only is advice given to medical experts, but suggestions are also made to attorneys as to the best methods of obtaining the desired information from the witness. The Bertillon and Greenleaf-Smart systems of identification are concisely and intelligently described, and the advantages of each stated. A chapter not usually found in works of legal medicine, though of far more than passing significance to both the medical expert and the attorney, is that on the medicolegal relations of the X-rays. The responsibility of pharmacists in the compounding of prescriptions, in the selling of poisons, in substituting drugs other than those prescribed, etc., furnishes a chapter of the greatest interest to everyone concerned with questions of medical jurisprudence. Also included in the work is the enumeration of the laws of the various States relating to the commitment and retention of the insane. In fact, the entire work is overflowing with matters of the utmost importance, and expresses clearly, concisely, and accurately the very latest opinions on all branches of forensic medicine and toxicology.

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**Tuberculosis.** Recast from lectures delivered at Rush Medical College, in affiliation with the University of Chicago. By NORMAN BRIDGE, A.M., M.D., Emeritus Professor of Medicine in Rush Medical College; Member of the Association of American Physicians. Handsome 12mo volume of 302 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Co., 1903. Cloth, $1.50 net. Canadian Agents: J. A. Carveth & Co. (Limited), 413-415 Parliament Street, Toronto, Canada.

In this excellent work the practical side of the care and management of those sick with the various non-surgical forms of tuberculosis has been concisely stated. Full consideration has been given to prophylaxis, an all-important phase of the subject that has heretofore been much neglected. There are also chap-

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ters upon the Bacillus of Tuberculosis; on the Pathology Etiology, Symptoms, Physical Signs, Diagnosis, and Prognosis of the disease, each treated in the judicious and thorough manner to be expected in a work by such a well-known authority as Dr. Bridge. Treatment is accorded unusual space, there being chapters upon Hygienic Treatment, Management of the Diseased Lung, Climatic Treatment, Medicinal and Local Treatments, Special Treatments, besides a chapter devoted to the subject of Sanatoria. Altogether the work is a most valuable one, and we heartily recommend it to practitioners as the latest and best work of its pretensions it has been our good fortune to review.

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**Veasey's Ophthalmology.** A Manual of Diseases of the Eye. For Students and General Practitioners. By CLARENCE A. VEASEY, A.M., M.D., Demonstrator of Ophthalmology in Jefferson Medical College, Philadelphia. 12mo. 410 pages, with 194 engravings and 10 full-page colored plates. Cloth, $2.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York.

As an authoritative and convenient manual of practical ophthalmology, this new work by Dr. Veasey is likely to prove a favorite. It is written for students and general practitioners, two classes of medical readers who should assuredly be or become familiar with all that is contained in this attractive little volume. Specialists naturally prefer the large and exhaustive works, but even they will find compendious manuals, like the present, convenient for prompt reference. The author has shown excellent judgment in what to include and what to omit —a very important matter for the reader. He has been guided in this by his experience in teaching both under-graduate and post-graduate students, and this same teaching ability is manifest in the systematic, practical and concise manner in which he has marshalled and presented his facts. The publishers have done their part by giving the book a handsome dress, embellishing it with nearly 200 engravings and ten full-page colored plates, and, withal, issuing it at a very moderate price.

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**Diseases of the Stomach.** By DR. F. RIEGEL, of Giessen. Edited, with additions, by CHARLES G. STOCKTON, M.D., Professor of Medicine in the University of Buffalo. Handsome octavo volume of 835 pages, illustrated, including 6 full-page plates. Philadelphia, New York, London: W. B. Saunders & Co, 1903. Cloth, $5.00 net; half morocco, $6.00 net. Canadian Agents: J. A. Carveth & Co, Parliament Street, Toronto, Ont.

This volume, like the others of this excellent practice, is thorough and complete. The importance of examining the stomach-contents in diagnosis, and the various methods of obtaining the contents and performing the examination, are discussed with the accuracy and clearness that spring from wide

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experience. Full consideration is given to the hydrochloric acid question as a factor in the pathology of stomach diseases, the latest views having been incorporated by the editor. Particular attention has been accorded disturbances of motility, and their influence in the disturbances of secretion. It is evident that careful study has been devoted to the subject of impairment of the absorptive powers, and the significance of gas-fermentation has been emphasized. The eminent editor, a recognized authority on diseases of the stomach, has added to the already excellent German text his own extensive experience, bringing the work in accord with our present knowledge. We are confident that for scientific excellence and completeness, as well as for mechanical perfection, this work stands unrivalled.

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## SURGICAL HINTS.

A plaster cast can easily be removed with a knife if the line of incision has been beforehand well saturated with ordinary vinegar, which softens the plaster.

The ordinary washing soda solution in which instruments are boiled will entirely ruin aluminum instruments, and hence should not be used for sterilizing them.

Plaster of Paris dressings that are liable to be moistened by secretions from a wound, as, for instance, in the treatment of compound fractures or of excisions, where a fenestrum is made, can be nicely protected by painting the exposed parts with melted paraffine.

In children prone to the development of so-called scrofulous glands of the neck, it is a mistake, unless they rapidly disappear under the influence of local and general treatment, to await the formation of abscesses. The latter cause more marked cicatricial deformity than does proper incision with enucleation, and there is always a possibility of systemic infection from the abscess.

In a case of gonorrhea in the male, a chill occurring without swelling of the external organs strongly suggests the possibility of prostatic abscess. Always examine by the rectum, and if the gland is large and tender, and hard though elastic, little time should be wasted before opening the perineum. The old method of opening through the rectum with a trocar is a bad one, because it is unclean and liable to result in the formation of urethro-rectal fistula, and because the abscess cannot be incised and drained as widely as by the perineal route.—*International Journal of Surgery.*

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# Selections.

## Hereditary Syphilis.

R. Matzenauer (*Wiener klin. Wochenschrift*) treats in an exhaustive article the question as to whether a paternal inheritance may be demonstrated, and comes to the conclusion that it cannot. He believes that Colles's law has no exceptions, and that cases of this kind cited in current literature which would demonstrate such exceptions are due to errors. Every apparently healthy though immune mother of a hereditary luetic child has latent syphilis. There is no hereditary syphilis without syphilis of the mother; it therefore follows that the mother of the syphilitic infant, even though she shows no symptoms, should be treated specifically. He advises that a syphilitic man in order to prevent the infection of the woman should not marry before the lapse of a number of years, nor until receiving a number of specific treatments.—*Medical Age.*

## The Operative Treatment of Puerperal Pyemia.

Sippel (*Centralbl. f. Gyn.*,) is induced by Trendelenburg's success in curing a case of puerperal pyemia by ligature of the hypogastric and spermatic veins to draw attention to the fact that in 1894, in a case of purulent phlebitis of the uterus which took the form of an acute pyemia, he proposed to remove the uterus and resect the internal spermatic and uterine veins, though he did not actually carry out this proceeding. Of four cases of puerperal pyemia, two recovered spontaneously; the other two could not for independent reasons be operated on, and both died. Sippel is not inclined to the extraperitoneal method suggested by Trendelenburg, and would only proceed by laparotomy, and having done so would remove the uterus as well as the veins; but many a case of pyemia recovers spontaneously, and operation is not indicated unless life is endangered. —*Medical Age.*

## Concerning Sea-Sickness.

Binz (*Centralblatt fuer Innere Medicin*), concludes that seasickness is due to anemia of the brain, and that the shaking of the vessel causes a contraction of the arteries of the head, which brings about this anemia. Acute local anemia has here, as in other cases, a tendency to produce nausea and vomiting. He would explain the periods of rest and ease by the fact that the act of vomiting, and the violent action of the abdominal muscles forces more blood to the brain. This overcomes for a time the anemia and its consequences. The stomach plays only

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a passive role, and is centrally stimulated whether it contains food or not.

In the treatment of sea-sickness means must be employed which encourage a flow of blood to the brain. Of chief importance is the horizontal position. Several hours before one goes on board the vessel he should take a hearty, nutritious meal. Internally, those drugs are indicated which bring about a dilatation of the blood vessels of the brain. Of these, chloral hydrate and amylnitrite have been found the most efficient.—*Interstate Med. Jour.*

**Drugs in Typhoid Fever.**

The literature of the last couple of years contains decreasing references to drug treatments in typhoid fever. The Woodbridge treatment seems to have fallen into disuse, but there is still search for an efficient intestinal antiseptic. Acetozone seems to fulfil this indication. A number of favorable reports have been made of the action of this remedy, which seems to modify the course of the disease.

Guaiacol in typhoid fever, while it was an essential ingredient in the Woodbridge treatment, is still believed by many to favorably influence the course of the disorder. It is sometimes given in the form of carbonate of guaiacol, but more commonly in four-or-five-drop doses every three or four hours in whiskey. The external application of 20 drops will produce a marked fall in temperature, though this means of reducing the temperature has sometimes been attended with collapse, the same as has been noted after the administration of antipyretics.

Among the later and more striking suggestions in the therapy of typhoid is that of Woroschilsky, who employs washed sulphur throughout the disease. From 15 to 20 grains is administered every two or three hours to adults, and a proportionately less quantity to children. It was found that this remedy lessened the diarrhea if present, and relieved constipation if it existed, although the dose had to be increased if the sulphur was expected to act on the bowels.—*Medicine.*

**Infectious Epithelioses and Epitheliomata.**

A. Borrel (*Annales de l'Inst. Pasteur*, January, 1903).—Under the name of infectious epithelioses A. Borrel comprises a number of exanthematic diseases, as sheep-pox, foot and mouth disease, vaccinia, variola, etc. They all have in common a predominant involvement of the stratified epithelium in the form of proliferation and secondary softening, and the fact that in none of them the causative micro-organism has as yet been discovered. All of them, however, have been the playground for parasite-hunters, and numberless formations found in the

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lesions have been described as protoz a, etc. (bodies of Guarnieri, etc.). Although careful investigation in no case has been able to prove these claims (including the latest publication about cultivating the vaccine virus), many still adhere to this opinion. Borrel has made a careful and beautiful investigation of the whole question on the most favorable material, and has come everywhere to the conclusion that the so-called parasites are nothing but polynuclear leucocytes, engulfed by the epithelial cells and gradually disintegrated in their protoplasm. The paper is beautifully illustrated, and the pictures are very convincing. That the peculiar formations found in molluscum contagiosum belong to the same category is probable. In a carcinoma that could be inoculated from one mouse to another (Jensen, (in 1902) described a similar inoculable carcinoma in the mouse). Borrel has found, also, inclusions which very much resemble the epithelioses forms, and most likely must be interpreted in the same way. It may be mentioned here that Apolant and Embden (*Zeitschr. f. Hyg. u. Infect. Krankh.*, Vol. 42, Heft 3), from the Ehrlich Institute in Frankfort, have published lately their studies on the cancer-inclusions, in which they come about to the same result—that all of these formations are products of degeneration.—*Interstate Med. Jour.*

## The Recognition of Incipient Tabes.

G. Flanau (*Berl. klin. Woch.*) deals with the diagnosis of tabes in the early stages. Referring to the absence of tendon reflexes, he says that the triceps reflex is not only not easy to elicit, partly on account of the difficulty of hitting the tendon cleanly, and partly on account of the difficulty of relaxing the muscle sufficiently, but it has been shown that it is frequently absent in perfectly healthy individuals. With regard to the tendon Achillis reflex, he has found that in 100 persons, who were certainly not suffering from tabes, it was absent on both sides in two cases, and on one side in a further two. In these four patients, the knee-jerks were present, and there was nothing abnormal to be found which could explain the absence of the tendon reflex. In eight of the cases the reflex could not be elicited in the ordinary way, but only could be demonstrated by Babinski's method. Since this method cannot always be carried out, it would appear as if several of the patients had absent Achilles reflexes, and he has come across the same condition in many cases of tabes. Flanau recites the histories of some early cases of tabes, and shows that the diagnosis can be made even when the cardinal symptoms are absent, if one regards the grouping of the signs, however slight they may be. A sluggish reaction of the pupil, an absent reflex, and a very small area of disturbed sensation of themselves will not justify

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a diagnosis, but when two of these are met with together, even when the anamnesis does not point to tabes, one is often put on the right scent. He illustrates the importance of localized disturbances of sensation in the early diagnosis, but finds it necessary to insist on repeated examination, to prove that this condition is constant. He further illustrates that one must not rely on the history of a past attack of syphilis, in making the diagnosis in doubtful cases, by quoting a case, which was like early tabes dorsalis, and in which there was a history of syphilis, but in which the condition proved not to be of this nature.—*British Med. Jour.*

**Chronic Granular Kidney.**

Claude and Burthe (*Biochem. Centralbl.*) have made a large number of observations on the elimination of the solids of the urine in patients suffering from this disease, fed on a constant diet. The urine was examined chemically, and also by a cryoscopic method. They found, confirming the work of others, that both the saline and the nitrogenous constituents of the urine were excreted usually in normal or even in more than normal quantity. The danger of the disease lies in the ease with which any disturbing cause, such as an infection or an intoxication, leads to a sudden fall of excretory power. They point out that the continuance of a sufficient excretion depends on the integrity of that part of the kidneys which is still functionally active, and on the maintenance of the raised arterial tension and the efficiency of the hypertrophied heart. Any interference with these three interdependent factors is liable to cause a failure of excretion and bring on uraemic manifestations.—*British Med. Journal.*

**Bromine vs. Chlorine.**

Experience has shown that the physiological effects of bromine are obtained with much smaller doses when chlorine salts are withdrawn from the dietary; moreover, the gastric intolerance which so often imposes the abandonment of the treatment is less readily induced. Direct experimental observation proves that bromine can replace chlorine in the animal economy, so that by substituting the former for the latter an organic compound of bromine is formed which enables us to obtain the therapeutical effects of bromine in a more satisfactory manner. This fact renders it possible not only to administer the bromides in larger doses without producing inconvenient collateral effects, but allows of the drug being exhibited over long periods of time without the supervention of symptoms of intoxication. It is a good plan to give bromide of sodium instead of salt in the food, which should consist largely, if not exclusively, of cereals, milk and vegetables.—*Med. Press and Circular.*

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# Miscellaneous.

## Britain's Only Salvation.

The *Daily Mail* prints a page of statistics showing why the new inebriate act was necessary. It shows that the death rate from alcohol during the last fifteen years has increased by 42 per cent in men and 100 per cent. in women. In 1892 the drink bill for the United Kingdom amounted to the colossal sum of £140,800,000, or £3 13s. 11d. for each head of the population. The charges of drunkenness heard in the police courts of England and Wales numbered 173,929. There are in the refuges for the insane 10,900 males and 5,800 females who owe their mental decay to the effects of alcohol.—*The Sanitarian.*

## The Results of Intravenous Injections of Dilute Formalin Solution in Septicaemic Rabbits.

William H. Park reports the results of recent experiments. Even after large doses of formalin the streptococci can still increase in the blood and cause death through septicæmia. Although these experiments are limited in number, still they are so uniform in their outcome that it seems fair to assume that non-lethal formalin injections cannot stop a septicæmia already started in healthy animals. These experiments, as well as others, and the fatal outcome of septicæmia in man after diluted formalin injections should cause us to be guarded in using formalin and make it necessary to weigh each case injected not only to determine when improvement ensues whether recovery has been promoted, but also when death occurs as to whether harm has been done. An intravenous injection of water plus sodium chloride may prove better than water plus formalin.—*Bulletin of the Johns Hopkins Hospital, March-April, 1903.*

## The Resuscitation of the Still-born.

Rythmical traction of the tongue has been highly lauded as a substitute for artificial respiration in attempting the resuscitation of apparently still-born infants, but this procedure, though of unquestionable utility, has the drawback of being somewhat difficult of application in these cases on account of the difficulty of obtaining and retaining a firm grip on the little tongue. As an alternative it is pointed out that rhythmical pressure on the base of the tongue by the finger introduced through the mouth answers the same purpose, and at the same time it has the advantage of freeing the upper air passages from any accidental cause of obstruction.—*Medical Press.*

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## A Symposium on Modern Prostatic Investigation.

The entire issue of the *American Journal of Dermatology and Genito-Urinary Diseases*, published at St. Louis, Mo., for May, 1903, will be devoted to a symposium on Modern Prostatic Investigation. The leading surgeons of the world will take part in this work, which will be discussed, arranged and presented in a manner never before undertaken. The following subjects will be discussed: (1) To what extent occupation tends to prostatic hypertrophy with especial reference to active indoor, active outdoor, and sedentary pursuits; (2) Which suffer oftenest, the phlegmatic or nervous, the lean or obese? (3) Etiology of prostatic hypertrophy; (4) To what extent the cystoscope has been of service in diagnosis; (5) To what extent habit is responsible for prostatic hypertrophy with especial reference to the use of alcohol and constipation; (6) In what cases palliation is advised, and of what it consists; (7) Ligation of the vasa deferentia and results; (8) Castration for prostatic hypertrophy and results; (9) Bottini operation or some modification of this treatment and its success with especial reference to complications, permanency of relief, etc.; (10) Supra-pubic drainage with an estimate of results; (11) Supra-pubic prostatectomy and results obtained; (12) Perineal prostatectomy and with what success; (13) Operation of choice for prostatic hypertrophy; (14) What unexpected complications have arisen during the operation for prostatic hypertrophy, and what during the post-operative conduct of cases; (15) Resume of prostatic work.

## Tobacco Deafness.

Wyatt Wingrave reports seventeen cases of deafness which he considers to have been due to excessive tobacco smoking. He emphasizes the following points: (1) That they were all well-marked cases of nerve deafness occurring in heavy smokers. (2) That the loss of low tones in 50 per cent. suggests an auditory equivalent for a recognized ocular lesion. (3) That there was definite scotoma in four cases and impaired sensation of vision in eight of them. (4) That the disease was symmetrical. (5) That 80 per cent. showed marked improvement on abstinence from tobacco, and this abstinence being supplemented by drug treatment, three were cured. But the habit was so strong and the will so weak that the forecast was not always encouraging.—*Medical Press and Circular.*

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In honor of the eightieth birthday of Professor von Esmarch, a gold medal has been struck by order of the German Samaritans' Union, to be presented to those who have specially distinguished themselves in attending to the wants of the sick.

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During menstruation the introduction of any medicinal agent into the vagina is contra-indicated and at this period the pain of catamenial irregularities can best be controlled by applying Antiphlogistine over the abdomen warm and thick and covering with cotton and a compress. This practice persisted in for several periods prevents headache, lumbar pain and other vicarious concomitant symptoms. Many women who have been physically incapacitated for a day or two each month have been permanently relieved by systematic use of Antiphlogistine at each menstrual illness. A potent influence is exerted over the sympathetic system which is so intimately associated with the physiological functions of the uterus that efferent stimulation neutralizes afferent irritation.

In the interval between menses, Antiphlogistine is successfully applied to the cervix of the uterus in the following manner: Make a small gauze sack and fill it with Antiphlogistine slightly larger in volume than the ordinary cotton tampon. Tie a string around the improvised sack and pass the Antiphlogistine tampon with dressing-forceps through the vaginal speculum to the os of the uterus, molding around the cervix. Through the induction of osmosis and dialysis of inter-cellular fluid, intra-mural tension is quickly reduced, local analgesia and undisturbed cervical drainage follow. For relief of a patulous uterus, the indurated cervix of endometritis and all irregularities of menstruation including amenorrhoea and dysmenorrhoea, this treatment is far superior to the ordinary glycerine tampon, rendering marvellous results to the clinician and patient.

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Arthur's answer—Pleasant old gentleman: "Have you lived here all your life, my little man?" Arthur (aged six): "Not yet."—*William Morse Hedrick, in Lippincott's Magazine.*

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, JUNE, 1903. NO. 6

## Original Communications.

### EXTIRPATION OF THE PROSTATE—FREYER'S METHOD.

By F. P. McNULTY, M.B., Peterborough.

My interest in this operation was aroused by following the rather acrimonious correspondence that ensued upon the publication of Mr. Freyer's initial series of cases in the *British Medical Journal* of June 20th, 1901. This correspondence served to show the wide diversity of opinion that exists as to the most suitable operation for chronic prostatic enlargement, some advocating the suprapubic method, others the perineal, and others still the urethral. Even by each of these different routes a variety of operations have been proposed, and whilst this multiplicity of methods may be taken as an index of the earnest efforts made by surgeons to arrive at some safe and suitable operation, it nevertheless emphasizes the unsettled state of the surgical mind. The remarkable success achieved by Mr. Freyer in his operation of total extirpation suprapubically gives ground for the hope that at last a safe and comparatively easy operation has been evolved for this most distressing and widespread malady. This success was so pronounced, and the relief obtained so marked, that I was induced to try by his method to give ease to a patient of mine whose life for a year past had been made miserable by all the evils of catheterism.

This patient was a gentleman, aged 69, who for three years had been suffering from symptoms of enlarged prostate, namely, increased frequency of micturition, so that finally he could retain urine for only one hour during the day and about half an hour at night, difficulty in starting the stream, intermittency of the flow, dribbling and pain above the pubes. At



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times there was absolute obstruction, and for some months he had occasional recourse to a catheter. Eventually he found it impossible to pass the instrument, and at this time I was first called in attendance. I found him in the greatest agony, bleeding freely from the urethra and straining ineffectually to pass urine. On enquiry I found that for two or three weeks he had drawn blood at each attempt to pass the catheter, and just previous to my arrival quite a free urethral hemorrhage had followed the introduction of the instrument. I gave him a quarter of a grain of morphia hypodermically, and after some difficulty managed to pass a small-sized silver catheter; about six ounces of foul offensive urine came away. Several false passages had been formed and despite the utmost caution in passing the catheter, pure blood ran through the lumen in alarming quantities. The next day he was removed to the hospital, and during the following two weeks his bladder was irrigated twice daily; this, combined with good-sized doses of strychnia and urotropin, appeared to add to his power of expulsion, and for the next four months he managed to urinate with varying success—occasionally passing the catheter, but each time inducing a free hemorrhage. On the night of Nov. 18th I was hastily sent for and again found him in the greatest distress; he hadn't urinated for nearly eight hours, bleeding from the meatus seemed to be even more free than usual, and on introducing the catheter far back into the urethra, it ran out into numerous false passages. I temporarily relieved him with morphia, aspirated the bladder suprapubically in the morning and again sent him into the hospital. A rectal examination revealed a general enlargement of the prostate, both lobes being quite firm and hard, and the left one quite painful. The hardness of the lobes did not justify the hope that double vasectomy might be of service, and so the patient was prepared for a suprapubic operation. The profuseness of the hemorrhage led me to suspect the possibility of malignant disease near the base of the bladder, but fortunately such was not the case.

With Dr. Boucher assisting and Dr. McGrath giving the anaesthetic, a steel catheter was inserted with difficulty, the bladder well distended with boracic lotion and opened suprapubically. Both lateral lobes bulged well into the bladder, their adjacent surfaces being in close coaptation. There was no indication of a middle lobe. It has been generally held that obstruction in these cases is due to the enlarged middle lobe producing a block at the internal orifice, but in this instance such was not the condition, the lateral lobes being the sole cause of the urinary distress. About two quarts of hot boracic lotion was allowed to flow through the catheter and

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out by the wound, the bladder was then mopped as dry as possible and the gland pushed well forward by the assistant with one finger in the rectum. The mucous membrane, covering the most prominent part of the left lobe, was then snipped through by scissors, the tip of the forefinger of the left hand introduced into the incision thus made and gradually worked around the tumor, which became easily separated from its surroundings and enucleated and removed without difficulty. The attachment of the mucous membrane to the tumor was not very intimate and caution, rather than force, was the only requirement for its separation. The right lobe was treated in a similar fashion, but on this side some tight fibrous bands attached to the sides of the tumor had to be torn through before complete freedom was obtained. This was very trying on the finger, especially anteriorally towards the triangular ligament, but by introducing the right index and middle fingers into the rectum and pressing forwards, the tumor was steadied and the separation facilitated. The inner side of each lobe peeled off readily from the urethra, which with the contained catheter was pushed well forward towards the pubic arch while the lobes were being freed in front from the triangular ligament. There was very little bleeding, and this was readily controlled with hot boracic lotion. Only the thickness of the bowel separated the fingers in the rectum and bladder, so that there is no doubt that the entire prostate was removed and not merely adenomatous masses enucleated. The cavity occupied by the prostate, owing to the hot douching, the contractility of the surrounding muscles and inherent elasticity of the tissues, soon became obliterated. A drainage tube was inserted in the suprapubic wound for forty-eight hours and a catheter tied in the urethra—this latter was thought necessary on account of the presence of false passages and the tendency to hemorrhage. The bladder was irrigated daily through the catheter, which was removed on the fifth day, and thereafter readily passed. On December 16th the patient passed eight ounces of urine naturally, and thereafter all urine was voided through the urethra. He was discharged from the hospital on December 23rd, and now, five months after the operation, is able to hold his urine six hours by day and rises only once during the night. There is now no sediment in the urine, which is free from albumin, odorless, and normal in all respects.

In the correspondence which ensued upon the publication of Mr. Freyer's papers, two main objections were urged against the operation. (1) That the prostatic portion of the urethra must of necessity suffer irreparable damage. (2) That the prostate was not removed in its capsule at all, but that

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adenomatous masses growing in the gland substance were simply enucleated. A truer conception, however, of the anatomy and pathology of the parts in question clears the ground, and shows in a new light the undoubted value of the operation. The prostate is really composed of two lateral lobes, which in some of the lower animals remain distinct and separate throughout life, as they do in the human male for the first four months of fetal life. After that period their inner surfaces become adherent, except along the course of the urethra, which they envelop in their embrace. The urethra is thus simply bridged above and below by prostatic tissues. These bridges have been termed the upper and lower commissures. In later life, as the lateral lobes enlarge, there is a tendency to revert to the fetal state, and each lobe bulges out into the bladder, becoming thereby more defined and isolated. In this condition the lobes, after their enclosing sheath has been opened and freed, readily strip off the urethra and separate along the commissures, leaving the canal uninjured and intact. Still more remarkable have been the results obtained in certain more recent cases in which this separation could not be readily effected, and in which the urethra was purposely torn across. In the fibro-myomatous forms of hypetrophy there is a firmer cohesion between the lobes than in the purely adenomatous variety, and in a number of instances of the former kind, the cohesion was such that the commissures did not seem to yield, and so it was found necessary to tear across the urethra anterior to the tumor. In addition to Mr. Freyer's four or five cases of this kind, Sir Wm. Thompson also reports a similar case in his practice, and in each instance recovery followed, and with it the power of retaining and passing urine naturally. The explanation as to what takes place after such a procedure is as yet purely theoretical. It is held that by contraction the neck of the bladder is advanced to the posterior surface of the triangular ligament, and that direct union takes place between it and the membraneous portion of the urethra, the canal being kept open by the daily passage of a catheter for irrigation purposes. The fact that these cases recover with the power of retaining and expelling urine voluntarily proves that the true sphincter of the bladder lies in front of the prostate, in the membraneous portion of the canal.

The second objection rests upon a misconception as to what is meant by the capsule of the prostate. The normal reflexion of the recto-vesical fascia forms the sheath or covering ordinarily thought of as the capsule; inside of this, however, is a distinct covering designated the "proper" capsule, and minutely described by Sir Henry Thompson in the last edition

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of his *Diseases of the Urinary Organs.* His exact words are: "The proper capsule, which cannot be regarded as a mere offshoot from any adjacent fascia, but is a special envelope belonging to the prostate itself, although thin, is firm in texture, and defines clearly the form and limits of the prostate here." It is in this proper capsule that the entire prostate is removed, and the procedure might in fact be spoken of as "extra-capsular" enucleation. If the recto-vesical covering were removed urinary extravasation would naturally follow with probably a fatal result. The fibrous bands uniting the proper capsule to the fascial covering are easily torn through by the finger, but as it is in this space, between the two capsules, that the prostatic plexus of veins runs, caution is necessary to avoid hemorrhage; by keeping close to the tumor with the finger, the bands and adjacent tissue readily peel off and the mass then completely shells out.

Some British surgeons of note are still skeptical as to the practicability of this operation, and Mayo Robson holds that complete removal of the prostate in its capsule is anatomically impossible. However, such opinions must soon give way in face of the remarkable results obtained by Mr. Freyer, who has now published an account of thirty-one cases, and in addition almost daily successful reports are being published by those who have followed closely his method. These reports are such as to engender the hope that this operation will soon establish for itself a recognized place in surgery, and relief thereby obtained from a most distressing and frequently fatal malady.

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# HODGKIN'S DISEASE.*

By WILLIAM ALLAN, M.B., C.M. (Edin.), Lindsay, Ont.

Gentlemen,—In making choice of a subject for the paper which I was asked to read before our society, I was influenced by finding some notes on a case of Hodgkin's disease which I observed during a few months when surgeon to the Los Angles Polyclinic, and though I must warn you in advance that they are rather scanty and inconclusive, still they may serve "to point a moral or adorn a tale" and engage our minds for a while in the consideration of conditions which, though enveloped in obscurity, still present a glimmer of light here and there allowing us to observe sufficient data on which to form a few definite ideas. The case I refer to is this: On April 8th, 1895, a Swiss, 38 years old, Joe Bisig by name, came to consult me at the polyclinic. He is a large-framed man with well developed muscles, but of pallid complexion; talks rather hoarsely. Twelve years ago he noticed, what he calls, a "little knot" on the left side of his neck, which remained in *statu quo* for eight years. Four years ago when he was working in irrigating ditches, often being in water for several hours at a stretch, he noticed this lump begin to enlarge, a couple of years later he got a hard cough, the gland enlarged still more, and six or seven others enlarged also till a year ago they attained such a size that they interfered with the turning of his head to the left. Some were as large as hen eggs, so he entered St. Vincent's Hospital in Portland, Oregon, and had them removed by Dr. G. A. Smith.

Bisig says he was a little hoarse before the operation and became more so afterwards. Previous to the operation his food often "went the wrong way," making him cough, but since then it stopped doing so. When he coughed after meals it continued till he vomited. Ten years ago he noticed on climbing hills that his breath was shorter than it ought to be, but not enough to interfere with his work. However, four years ago, after the glandular hyperplasia began, his breath became shorter still, and got worse after the operation, though he doesn't think there is any marked difference now. He can walk fast for a block or two, but then becomes winded; feels it most after lifting a heavy weight. Has been pale all his life, like the rest of his family, he says. When in health was above the average in muscular strength. When a boy he tells me he was several times grasped round the neck by "pretty hard fingers." Had gonorrhea a couple

* A paper read at the meeting of the Victoria County Medical Society, April 9th, 1903.

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of years ago, but never had syphilis. Used to weigh 215 pounds, but had lost seven or eight pounds before the operation, and some more since At present still weighs about 190 pounds Hasn't been able for hard work, and is employed herding and milking cows.

*Physical Examination*—Presents a T shaped scar behind the left sterno-mastoid. Numerous, enlarged, hard, separate glands can be felt over the anterior and posterior triangles of the neck on both sides, and behind the angle of the jaw, none much larger than a hazel nut, except some above the sternal end of the right clavicle, which appear to be fused in one mass. Some are enlarged under the sterno-mastoids and continue to be felt until palpation is lost behind the clavicle and sternum. The left infra-clavicular region is tumefied. There is complete dulness with loss of elasticity from the left edge of the sternum extending outwards to the anterior border of the thorax, and downwards to where it merges into the cardiac dulness. Over this area the breath sounds are very weak, and there is neither vocal fremitus nor resonance. Over the analogous area on the right the percussion note is good and the breath sounds strengthened through compensation. At the left base a sonorous râle is sometimes to be heard, but the percussion note is clear on both sides, though the breathing is harsh with expiration sound prolonged on the left side. There is an irritating cough at times with mucoid expectoration, but in which there are no tubercle bacilli. Respirations, 23; pulse, 108. Heart sounds faint, especially the first. Apex beat imperceptible; spleen not perceptibly enlarged, certainly not increased more than half an inch in breath. Liver dulness, five inches from sixth rib downwards, therefore not markedly increased. No ascites, edema nor enlarged veins, unless possibly the external jugulars. No hemorrhages. Inguinal glands very distinct, and the lymphatics hard, rather more marked than ordinarily; but patient says he never remembered noticing them any smaller. Abdomen appears natural. Remains of a papular eruption over his body, and copper-colored spots on his chest, which used to be very itchy. Says it began a year and a half ago after taking iodine or iodides. Urine, natural; specific gravity rather low. Blood looks normal under the microscope; red globules not counted, but evidently deficient in quantity from the paleness of his lips and eyelids, and from the difficulty of getting it to come from a prick in a constricted finger. The nature and distribution of the glandular enlargements, the absence of ulceration suppuration or caseous degeneration in them, their gradual development, the evidence of adenoid growth in the mediastinum, and the general history of the patient's illness, point it out as being a well-marked case of

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Hodgkin's disease. He was ordered tincture of iron and Donovan's solution, fifteen drops of each in plenty of water, after meals. He was seen by a colleague on the 9th May, who tells me that he appeared to have improved in condition, and that the glands which were coalesced had become more isolated. I was able to corroborate this observation when he again visited the Polyclinic on June 3rd; he then informed me that he had felt better until he had caught cold a week before, when his dyspnea increased and made him return for some medicine to relieve it. Ordered spiritus etheris co, nitrosi, chloroformi and ammoniæ aromat, equal parts; a teaspoonful as required. Saw him again July 9th; had been a few weeks in the County hospital, as the poor-house is euphoniously termed; had lost weight and was weaker and more anemic looking; the glands didn't appear to have increased much; expressed his intention of returning home to Switzerland. I recommended him to continue taking the iron and Donovan's solution and to pound up ribs and vertibræ of sheep, steep in glycerine, strain and take a teaspoonful after meals. This was the last I saw of the case, which, no doubt progressed to a fatal termination, as usual.

The spontaneous and diffuse hyperplasia of lymphatic glands is always coincident with an alteration of the blood, which, although not of the same nature in every case, is always accompanied by one condition, viz., a diminution in the number of red corpuscles. The other changes consist in some cases in a persistent augmentation in number of the white corpuscles as well, so that instead of the ratio being 1 to 3, 4 or 5 hundreds, it may rise to 1-20, 1-10, and even 1-3. Names have accordingly been coined to express these conditions—thus, to indicate the increase of the white corpuscles or leucocytes, John Hughes Bennet, in 1845, called this form leucocythemia, and Virchow, later, leukemia, and in order to emphasize the diminution of the red corpuscles and at the same time connect it with the lesion in the lymphatic system. Hodgkin, in 1832, termed the other form anemia lymphatica, and Wunderlich, in 1866, pseudoleukemia; but usually these cases in which the glands are enlarged without increase in the number of the white globules are called, after its first describer, Hodgkin's disease.

In all of these terms the effect and not the cause of the disease is brought into prominence, and must necessarily remain so until that cause is freed from the obscurity which surrounds it. Whatever that cause is, however, the opinion expressed by Prof. Jaccoud, of Paris, over thirty years ago, that these two morbid conditions are not really different diseases, but merely modifications of one disease, seems to be gaining ground and, at any rate, has never been disproved. Jaccoud pointed out that in

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the disease called leukemia one or more of the hematopoietic organs becomes the seat of a nutritive stimulation or irritation which increases their size and a functional irritation which exaggerates their work, giving rise to a great excess of white globules. When this process starts with the spleen the leukemia accompanying is termed splenic, when the lymphatics are the first or sole organs involved it is called lymphatic or glandular leukemia, while in other very much rarer instances where the solitary and agminated glands of the intestine are alone affected it has been termed intestinal leukemia.

So, in making a comparison between leukemia and pseudo-leukemia it is necessary to contrast the glandular form of leukemia with the chronic form of pseudoleukemia. Commencing with their clinical aspect, we remark that the beginning of the disease in both is slow and insidious; a very long time may pass before attention is drawn to it. For instance, Christopher Heath mentions the case of a boy from whom he removed some enlarged axillary glands, and not till six years afterwards did he develop general glandular hyperplasia. And in this case of Bisig we see one enlarged cervical gland remaining quiescent for eight years before active increase commenced, and then two and a-half years more passed before the others took on the diseased process. Generally the first thing noticed by the patient is the appearance of a tumour, a swelling where no swelling ought to be; in other cases it is a gradual increase of weakness without any notable derangement of health or disorder of any organ in particular that first attracts the patient's attention. He feels more easily tired out, is not so fit for his work as formerly, the least exertion is irksome, he becomes dull and apathetic. If he lays off work, he doesn't lose a great deal of flesh for quite a long time, but if he continues active life he soon emaciates. So far these are only symptoms that may be referred to the anemia, and this condition may last for a long time until later symptoms arise which are identical in each, owing their origin to the same cause, viz., the mechanical results arising from pressure. While these enlarged glands continue limited for long to regions away from the neighborhood of organs which their bulk might injure, symptoms will be long in developing, but when they encroach on important organs or nerves they produce such effects as alterations of the voice, dyspnea, vomiting edemata.

In leukemia hemorrhages from the mucous membranes, especially the nasal, are frequent; so also in pseudoleukemia. Eberth, in 1869, mentions a girl of 9 who had frequent hemorrhages from the nose and mouth. Payne mentions a boy of 19 who had abundant epistaxes, though the cervical and thoracic glands were normal. Bohn mentions subcutaneous hemorrhages

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like purpura in a man of 56 who eventually died from subacute peritonity. Virchow speaks of the frequency of papular emptions in leukemia, and Trousseau found them so often present in pseudoleukemia that he introduces it in his didactic description of that disease. Mosler, in 1868, called attention to the presence in leukemia of stomatitis and pharyngitis, producing a fungous state of the mucous membrane. Meyer, Bohn and Eberth say they are often initial symptoms in pseudoleukemia. Dyspnea is met with in both, which, as in chlorosis, is partly due to the deficiency of red corpuscles, but is, of course, most prominent when there is also mechanical obstruction from enlarged glands. In both there is usually low fever of a remittent or intermittent type. The causes of death in both are similar—hectic or cachexia, repeated hemorrhages, asphyxia, pleurisy, peritonitis or brain lesions serous or hemorrhagic. There is thus no special difference during the commencement, course, or termination of these affections.

If we now turn to their anatomical aspect we find also a similarity—sometimes a simple hypertrophy of the adenoid cells alone, sometimes an increase of the connective stroma as well; the former being usually the rule in leukemia, the latter in pseudoleukemia, but not invariably—thus Trousseau had a patient under observation who, after consulting several Parisian physicians, went to Berlin to have the benefit of Virchow's advice, and was told by that great authority that his blood was not leukemic. Shortly afterwards the pressure effects of the glandular masses in his neck caused his death, and Virchow made a microscopic examination of the glands and found nothing but proliferation of the adenoid cells—adenoid hyperplasia.

Acute pseudoleukemia, as Julius Dreschfeld points out in a very interesting lecture in the *British Medical Journal* of April 30, 1892, differs only in degree from the chronic variety—it runs its course rapidly instead of slowly. He mentions the case of a strong, vigorous man of 23 who lived only five or six weeks after symptoms of the disease commenced. In this case the mediastinal glands were involded with proliferation of both cells and stroma. The spleen was enlarged, weighing 16 ounces; there were deposits in the liver and kidneys; but none of the superficial glands were enlarged. The patient was anemic and somewhat emaciated. Temperature 100.4° F. Cough and dyspnea were present, being, in fact, the symptoms that led him to enter the hospital. The lincocytes were increased in number, there being 1 white to 40 red. Now, was the altered ratio due to the diminution of red corpuscles or was there an actual increase in the number of white ones? Diminution in number of the red corpuscles is not entirely due to splenic enlargement. Lloyd Roberts, in 1869, published in the *British Medical Journal*

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the case of a woman of 26 who had no enlargement of the spleen, or of the lymphatics, yet whose blood had 1 white to 2 red corpuscles—here there may have been a defective transition of white into red globules, though some claim that white corpuscles never change into red ones. This woman was cured in three months. With regard to splenic enlargement in chronic pseudoleukemia, Dreschfeld states his experience to be that it is present only to a limited extent, and then only as a result of metastatic deposits, which sometimes, indeed, produce an enormous enlargement. In this acute case, however, there were no deposits in the spleen, although it weighed 16 ounces.*

The close alliance of all these morbid conditions seems to point to a similarity of causation in them. If we now turn to the search of that cause, it will be appropriate at first to briefly consider the present state of our knowledge concerning the numbers, origin and destruction of the blood corpuscles.

When most of us learned physiology we were taught that the cells in blood consisted of two kinds—the red, of which there were about 5 millions to the c.c., and the white much less numerous, being present in the ratio of 1 to 3, 4, or even 5 hundred of the red. Other smaller irregular bodies were noticed, but considered as disintegrations of the red ones. It is known now that the number of the white corpuscles vary within wide limits under certain conditions—thus the ratio in the splenic vein is 1-60, while in the splenic artery it is 1-2,000. From this it is inferred that a great destruction of red globules takes place in the spleen. They increase largely after a meal and disappear in enormous numbers when blood is drawn from the body. Since our student days these cells, red and white, have been subjected to more rigorous microscopic scrutiny, and another constituent, called blood-plates or tablets, is described, 18 to 250 thousand in the c.c. of blood. These may be shortly noticed and dismissed at present, as the physiologists who recognize them differ so much in the views they entertain regarding them: some think they take part in the coagulation of the blood, others that they are disintegrated leucocytes, which, since they rapidly break up and dissolve in drawn blood, seems probable enough. The behavior of cells under various stains, such as eosine, which Ehrlich employed, has also been observed. The results of these studies, if not productive of much useful information hitherto, has been to multiply names to a rather alarming extent. Certainly nothing should be deemed trivial which tends to the advancement of knowledge; but grave distinctions without equivalent differences are always

* It is well known that the spleen varies in magnitude more than any organ of the body, not only in different individuals, but in the same under different conditions. Its weight ranges from 5 to 7 ounces in the male; but, even when perfectly free from disease, may fluctuate between 4 and 10 ounces.—QUAIN.

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to be deprecated, and pedantry, even when scientific, is always ridiculous. For instance, when one enthusiast declares he can distinguish twelve different (?) kinds of leucocytes, the difference depending mainly on their varying bulk, it does seem a case of tweedledum and tweedledee and the veriest virtuosity of science; and that a few of them which take on the eosine dye are called eosinophile, or friendly to eosine, cells seems little better, since they seem to possess no other special characteristics and are not clearly associated with distinctive morbid conditions—their friendship or enmity to the ingredients of the microscopist's dye-vats is of little consequence to clinicians so far. Lawson Tait says: "Periodically we have an irruption of new nomenclatures for tumors and cancers, and with their new names the propounders firmly believe they have new truths and new conclusions. But it has not proved so yet. The new words introduce confusion, trouble the seniors, and make juniors feel as if they knew something their fathers were ignorant of—but they do not."

With reference to the formation of the red corpuscles in extra uterine life, it was long believed and is yet, by some, that they are formed from the white ones. Many physiologists now say that they are formed from special nucleated cells in the red marrow of bones, termed erythroblasts, and quite independent of the white corpuscles, whose precursors are called leucoblasts. The erythroblasts are neucleated like the red corpuscles of birds, fishes and reptiles, but are colorless at first. After hemorrhages, the blood-forming power of the red marrow becomes much more active, and greatly increased numbers of these nucleated erythroblasts and their transitional forms, are to be seen, parts of the yellow marrow itself becoming reddish. In this state of affairs the spleen, which is considered to be a kind of red corpuscle factory in the fœtus, again temporarily assumes that function to repair the loss. The liver is said not to share in a similar renewal of prenatal occupation. In the red marrow the erthroblasts are said to be found within the blood vessels, while the leucoblasts appear in the extra vascular tissues. The protoplasm of the erythroblasts is almost always homogeneous, and never granular or mobile, like that of the leucoblasts. The leucocytes are still supposed to be formed in the lymphatic glands, the intestinal adenoid cells, the red marrow of bones and possibly in adenoid structures generally. With regard to the destruction of red corpuscles, the liver is considered one of the chief organs concerned, since the blood in the hepatic vein contains much fewer red cells than that in the portal vein, and there is no doubt but that the bile pigments are derived from the hemoglobin. The spleen also is said to share in the work of destruction, as

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cells containing broken-up red corpuscles are found in its pulp, and as similar cells were found in the red marrow by Bizzozero, thirty years ago, it also is credited with powers destructive as well as constructive. This, you see, is blowing hot and cold—but that is nothing to some speculators. Diminution in the number of red cells is a feature in many diseases besides the two under comparison, but whether due to a defect of development of erythroblasts or to an actual increase in the destruction of red corpuscle is not clearly determined. To leukemia there is an actual increase in number of the leucocytes, so much so that the first observers of the disease called it pus in the blood. There is an actual destruction of red corpuscles in other diseases; for instance, yellow fever, acute atrophy of the liver, progressive pernicious anemia, paroxyomal hepatic hematurea. In these cases the cause has been attributed to germ poisons or ptomaines, which may either act directly on the corpuscles, or by leading to an excessive production of the bile acids, since George Harley found that injecting bile or bile acids under the skin of a dog's back had a powerful disintegrating effect on the red globules and gave rise to hematurea, which he qualified as hepatic, and since then ordinary chlorosis has been sometimes attributed to the absorption of ptomaines from the color. On the whole, then, there is no satisfactory conclusion to be arrived at as to the cause of the destruction of red corpuscles in leukemia or pseudoleukemia; but the report of Verdelli in the American Journal of the Medical Sciences for February, 1894, if confirmed by other observers, will do much to unravel the mystery. Verdelli reports two cases of pseudoleukemia and one of leukemia, in all of which, both by culture from the lymphatic gland, and from the blood, and from sections of various organs, he was able to demonstrate the presence of staphylococci pyogenes in pure culture. In one case staphylococci were found in an axillary gland removed three and a half months before death, in cultures from the blood in the heart two hours after death, and in some cultures from glands removed at the autopsy. In the second case, cultures from an inguinal lymphatic, excised twenty-one days before death, yielded negative results, although staphylococci were found in sections of the gland and in cultures of blood from the heart, femoral veins and other organs two hours after death. In the third case, staphylococci were obtained six hours before death in pure cultures from blood out of a finger, and immediately after death from the spleen and various lymphatics. By introduction of these cultures into the peritoneal cavity and subcutaneous tissues, as well as by the introduction of bits of excised glands into the peritoneal cavity. Verdelli says he obtained the following results in rabbits:

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1. Enlargement of lymphatic glands, liver and spleen.
2. Round celled infiltration, diffuse and circumscribed, resembling lymphomata, especially perivascular, principally in lymphatic glands, spleen, liver and lungs, less commonly in the kidneys.
3. Slight thickening of the connective tissue in all the viscera.
4. More or less marked and extensive atrophy, and necrotic processes, involving the parenchymatous cell (of lymphatic glands, spleen, liver and lungs, but especially the liver and kidneys) in special relation with the inoculated infectious agent.
5. A slight, but indubitable arteritis, always more pronounced in the spleen and lungs.

All in all, the changes bore a close resemblance to those in leukemia and pseudoleukemia. From a comparison of the two cases of pseudoleukemia the inference is drawn, that the degenerative and neoplastic processes may present great variations in individual cases, the one may preponderate to such a degree that the other may be almost wanting. The fact that micrococci found in the blood and lymphatic system in all three cases were alike, that in one case they were found three and a half months before death, and finally that it was possible to induce in rabbits, anatomic changes resembling those found in leukemia and pseudoleukemia, appears to Verdelli to afford strong confirmation of the view that there is a causal relation between the micro-organisms and the disease. As suppuration was not observed in any of the cases, and only exceptionally in any of the experimental observations, it is to be concluded that the virulence of the micrococci was attenuated, the pallor of the colonies and their decolorization under certain conditions, likewise indicating a lessening of chromogenetic activity.

So much for Buckingham—or rather Verdelli—and as that is the latest thing I have heard on the subject, for whether his experiments have been confirmed or his influences disputed, I know not, so I will now finish what is a long, and perhaps tiresome paper, by remarking, as I said at first, that there remains a good deal to be found out yet, before the disease is satisfactorily explained.

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# Selected Articles.

## THE USE OF ANTITOXIN IN THE TREATMENT AND PREVENTION OF DIPHTHERIA.

By ROBERT DAWSON RUDOLF, M.D., EDIN., M.R.C.P., LOND.,
Lecturer on Medicine and Clinical Medicine in the University of Toronto.

The object of this short communication is to give the results of our experience with diphtheria antitoxin in the isolation wards of the Victoria Hospital for sick children of Toronto (*a*) in the treatment, (*b*) in the prevention of diphtheria.

1. During 1901 there were an unusually large number of cases of diphtheria in the hospital. In spite of every possible care being taken, every now and then a case would be admitted while in the incubation period, and although suspicious cases were immediately isolated, the disease would spread. We had during 1901, then, about 100 cases of the disease, all proved bacteriologically to be diphtheria. All of them, except a few very mild ones, were treated from the outset with antitoxin, and only three died, and one of these was complicated with scarlet fever. Unfortunately, no actual note was kept of the number of cases during that year, and although I believe that 100 very nearly represents the total, still the percentage of deaths loses most of its value, and I only give it as a general statement. The number of deaths is accurate.

Since January 1st, 1902, we have kept a book in which all cases have been entered, with details as to age, sex, number of days ill before being admitted to the infectious wards, treatment, etc., and from this book I take the following facts:

Between January 1st and July 7th there were forty-two cases of diphtheria admitted to the infectious wards, all of which showed the Klebs-Loeffler bacillus. In nearly all cases the bacillus has been of the short variety. All except a few of the mildest were given antitoxin at once on admission, frequently before the bacteriological report had been received, the initial dose varying from 1,500 to 4,000 units. The dose was repeated in a few hours if required. In addition, the throat cases had their fauces painted with Loeffler's solution of menthol and sesquichloride of iron, and where the nose was affected a spray of very dilute corrosive sublimate was used.

Of the forty-two cases thus treated, forty-one recovered completely. One died, a girl aged 13 years, and some details of her case are as follows:

It seems that she had been in the city Isolation Hospital

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several weeks before, suffering from diphtheria. She was discharged in May, and was admitted to the Children's Hospital on June 12th for genu valgum. Her history states that she had "kidney disease," and her urine on admission contained albumen and casts. On June 23rd she was sent into the diphtheria ward suffering from a mild attack of faucial diphtheria. So mild, indeed, was the case that she was not given antitoxin. A week later, when her throat was clear and her temperature normal, she developed uremic symptoms, and died very quickly. She was given 3,000 units of antitoxin when the uremia developed, in hopes of neutralizing the toxin that might be irritating the kidney, but no amelioration resulted. The necropsy showed the kidneys to be contracted, markedly cirrhotic and white on section. The left weighed 5 dr. 12 gr., and the right 5 dr. 36 gr.

It is thus scarcely fair to call this a case of death from diphtheria, although that disease undoubtedly precipitated the final result. If antitoxin had been early and freely used possibly that result might have been averted, as the cirrhosed kidneys might have been saved the toxic irritation; but one can only surmise on this point.

On the other hand, would the presence of renal disease have contraindicated the use of antitoxin? A large amount of literature exists upon the occurrence of albuminuria after the use of the serum. C. E. Michael, in a series of analyses from the returns of the Metropolitan Asylums Board of London in 1898, found that the use of antitoxin in diphtheria increased the percentage of cases of albuminuria, but, on the other hand, decreased markedly the occurrence of nephritis. McCullom at the Boston City Hospital found that cases of albuminuria of diphtherial origin more often showed a decrease than an ncrease in the albuminuria after the use of antitoxin.

There was only one case of post-diphtherial paralysis—a very severe one, involving the muscles of deglutition and of all four extremities. It occurred in a boy of 14 years of age, who had a slight attack of nasal diphtheria as a complication of scarlet fever. So slight was the affection that no antitoxin was used. He recovered completely. Thus the only two of our cases that went wrong were cases in which the disease seemed so slight that antitoxin was not used. Several of the forty-two cases were of a very severe type.

One, boy of 7 years, was not admitted to the diphtheria wards until the fifth day of his illness. His swab had persistently shown only a streptococcus infection until then. His pharynx was most extensively involved, and the disease had spread into both nostrils. He was unconscious and delirious. The case looked hopeless, but he was given 4,000 units of anti-

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toxin, and 6,000 more within the next twenty-four hours. He also received 20 c.cm. of antistreptococcus serum, as the infection was a mixed one. Improvement set in at once, and he recovered completely.

I am fully aware that one cannot dogmatize from the results of the use of antitoxin in forty-two cases, but the series helps to swell the enormous mass of evidence in favor of the value of the serum in the treatment of diphtheria.

The most extensive report upon the use of antitoxin has been published by Dr. Otto Jelinek, of the State Institute for the preparation of diphtheria antitoxin in Vienna. He has collated the published reports of all observers in all parts of the world to the close of 1898. Altogether he has records of 127,359 cases of diphtheria in which the serum was used, with 18,088 deaths—that is, 14.2 per cent. From an analysis of 52,521 cases, showing a death-rate of 15.28 per cent., he gives the following most convincing figures:

| | | | | | | |
|---|---|---|---|---|---|---|
| Those treated | with | antitoxin | on the | 1st | day | had a mortality of 5.07 % |
| " | " | " | | 2nd | " | " 8.49 % |
| " | " | " | | 3rd | " | " 15.56 % |
| " | " | " | | 4th | " | " 23.36 % |
| " | " | " | | 5th | " | " 30.02 % |
| " | " | " | after the | 5th | " | " 23.36 % |

This table includes cases from all parts of the world, in all climates, in hospitals and private practice, amongst the poor and the well-to-do.

One might quote at any length from statistics published by different writers, but suffice it to say that they all tell the same tale of mortality reduced in proportion to the earliness of use and the quantity of antitoxin given.

2. The results of our employment of antitoxin in the prevention of diphtheria have, as far as they go, been equally striking.

In all the institutions devoted to the care of children diphtheria is a frequent and dreaded scourge, and the Victoria Hospital for Children has been no exception to the rule. In spite of every precaution which could be thought of the institution has almost constantly had some diphtheria in it, and the Lady Superintendent informs me that during the five years that she has presided there there have never been two successive weeks in which the disease has been completely absent. Twice a year an exacerbation has regularly occurred, namely, when the children were moved over to the Summer Hospital on the Toronto Island in May, and when they returned to the city in October. The usual increase in cases occurred last June, and threatened to become more serious than the average.

In the first week in July every individual in the hospital was given an immunizing dose of from 300 to 500 units of



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antitoxin, and the dose has been repeated every three weeks since. There are, on an average, 165 souls in the institution. Every new patient has been given a similar dose on admission, and every three weeks thereafter. The result has been most gratifying. Not a single case of diphtheria has occurred in the hospital since the immunizing treatment was commenced, that is, for a period of over five months. During this time the usual number of cases have been occurring elsewhere in Toronto.

Dr. William Goldie, the bacteriologist to the hospital, has on several occasions during the last few years examined swabs taken from the throats of healthy inmates of the hospital, and has always found that a considerable percentage of them showed the Klebs-Loeffler bacillus. He has made similar examinations recently, and finds that, as before, a percentage of apparently healthy throats show the bacillus. Thus the germ is present, but its hosts are immune, and hence no diphtheria occurs.

A large amount of literature is rapidly accumulating, showing the good results that follow the use of immunizing doses of antitoxin. A good summary of this evidence up to date is given by Northrup in his excellent article on diphtheria in Nothnagel's *Encyclopedia of Practical Medicine.*

As regards the safety of using these immunizing doses of the serum, our experience has also been in accord with that of most observers. Altogether upwards of 1,000 doses have been administered by Drs. Graham, Wright and Waters, the resident physicians of the hospital. They have been given to patients suffering from all kinds of diseases, and yet in no instance have any serious symptoms been produced. Not a single local abscess has occurred. A certain percentage of the cases have shown eruptions, and in three instances these have been petechial. It is interesting to note that the resident physicians have found that the eruptions occur almost exclusively after the first injections; a few have appeared after the second, and none later on. This point does not seem to have been remarked before.

Our experience with antitoxin, then, would lead us to the following conclusions:

1. Every case of diphtheria should be treated with antitoxin. As a rule, the diagnosis is easily made clinically, and it is better in such cases not to wait for the bacteriological report, but to inject the serum at once. Then, if the diagnosis is confirmed by the bacteriologist, one has "stolen a march" of several hours on the disease; if the case proves not to have been diphtherial, one has at least done no harm.

2. The serum should be administered not only early, but also freely, 3,000 units being an average first dose.

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3. This use of antitoxin in no way interferes with the employment of any medicinal or other treatment which may be indicated, but all the latter are of secondary importance during the first few days of the illness.

4. All individuals who are exposed to infection should be given immunizing doses of antitoxin, just as all people who run the risk of smallpox infection should be vaccinated.

5. Five hundred units is the ordinary immunizing dose, but 300 seems to be sufficient for children under 2 years of age. The dose should be repeated at least every three weeks while any danger of infection lasts.—*Brit. Med. Jour.*

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## CASE OF A MAN BLIND FROM CONGENITAL CATARACT WHO ACQUIRED SIGHT AFTER AN OPERATION WHEN HE WAS THIRTY YEARS OF AGE.

BY A. MAITLAND RAMSAY, M.D., GLASG.,
Surgeon to the Ophthalmic Institution, Glasgow Royal Infirmary.

A man, aged thirty years, blind from birth, was brought to the Glasgow Ophthalmic Institution on February 24th, 1903. He was one of a family of seven, and although, as far as could be ascertained, there was no hereditary predisposition to blindness, one sister, as well as himself, was born blind, and another (who died at the age of thirty-five years) lost her sight when she was two years old. The rest—a brother and three sisters—are said to have been able to see perfectly well. The sister who was born blind, now thirty-three years of age, was brought up in the Blind Asylum, but the patient himself was allowed to run about as he pleased, no attempt to educate him having ever been made. He became, however, so familiar with the country district (a few miles from Glasgow) in which he resided, that he could go about without the slightest fear; and his hearing was so acute, that he knew at once if there was anything unusual on a road along which he was walking, and thus he never had any difficulty in keeping himself out of danger. The "sense of obstacles" spoken of by psychologists, was indeed developed to such a degree that he hardly ever came in contact with what might be in the way; he seemed to perceive the obstruction as he approached, and was thereby enabled to avoid it. As he passed along a road he could tell a wall from a hedge by the sound of the air coming through the leaves and branches of the latter. He could easily go on an

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errand to any house in his native village, for the resonance of his footfall—quite different in sound when he was passing a building from what it was when he was opposite an open space—enabled him, perfectly familiar as he was with his surroundings, to count the houses as he passed, and thus to turn corners, and finally to stop at the one which he wanted. In a strange place, however, he could never trust himself to go about without a guide, because his sense of hearing conveyed nothing to him beyond the difference between passing buildings or open spaces, and number could not come in to render the auditory impressions definite. Experience taught him in the same manner to find his way about the garden in which he worked, and he learnt to pluck flowers, to arrange them in bunches, and to pack them in boxes for the market, not only without the slightest difficulty, but with very great accuracy. He distinguished different blossoms partly by touch, but chiefly by smell, and by dint of asking questions he got at last to know so much about their form and color that he could arrange them in a bouquet. He recognized the presence of strangers in the house chiefly by the sense of hearing—for example. he could discriminate persons whom he knew by the sound of their respiration, and he was at once cognisant of any breathing with which he was unfamiliar. Besides this, however, he said that if he came into the house when any strange person was there he experienced a sense of "fulness." He was unable to put this in clearer terms, and the feeling may correspond to that ascribed by Wardrop, in 1813, in his "History of James Mitchell, a Boy Born Blind and Deaf," to a highly developed sense of smell. Occasionally he worked in the harvest field and he could bind the corn and arrange the stooks as well as any of the other laborers. He said that he was even able to build the sheaves on a cart and naïvely added that although the load might not look "elegant," yet it always remained firm on the cart. At other times he assisted in trimming turnips with a large sharp knife, and only on one occasion did he cut himself. In the winter he was employed by a farmer to feed cattle, and as he walked along the byre, his sense of hearing guided him unerringly to the stalls where the cows stood, so that he had no difficulty whatever in carrying food to them and placing it in the troughs.

The eyes were small and deeply sunk, and they moved continuously in the sockets, and there was a very pronounced alternating convergent squint. The irides were natural, the pupils were active, and the intraocular tension was normal, but both lenses were completely cataractous. The patient was quite unable to distinguish objects, although he could tell day from night, and could easily perceive a light and locate it

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accurately; and in this he resembled the boy Mitchell who could clearly discriminate light; but, unlike him, he does not appear to have had pleasure in its brightness, and, as he seems to have had no perception of bright colors the opacity was probably more complete. As the cataract seemed to be the only obstacle to vision, I resolved to operate, and I extracted the lens from the right eye on March 11th, and that from the left eye a week later. Prior to the former operation I made a preliminary iridectomy in order to test the vulnerability of the ocular tissues. Chloroform was administered as the patient was quite unable to control the movements of his eyes, and this ocular restlessness proved afterwards to be very troublesome, the constant motion under the dressings causing so much irritation that the bandage had to be removed and dark spectacles substituted. Both lenses were small and shrivelled and the nucleus of the right was calcareous. For about ten days after the operation on the left eye, the patient appeared to be quite dazed and could not realize that he was seeing. The size of everything in the ward seemed to be very much exaggerated, and on that account he had great difficulty in interpreting what he saw, but as he is inquisitive and has a keen desire for knowledge, he took from the outset a most intelligent interest in his own case and asked numerous questions of his fellow patients. The first thing he actually perceived was the face of the house surgeon. He said that at first he did not know what it was that he saw, but that when Dr. Stewart asked him to look down, the sense of hearing guided his eye straight to the point whence the sound came, and then, recalling what he knew from having felt his own face, he realized that this must be a mouth, and that he must be looking at a face. Once he properly understood what vision meant, he made very rapid progress, and his extraordinary retentive memory enabled him to take full advantage of everything that he was told. He was quite ignorant of color, but learned to distinguish hues very quickly. The first tint that he saw was red. A red blanket lay across the foot of his bed. He asked what it was and was told and never afterwards did he have the slightest hesitation in discriminating red again. He was shown a narcissus, and on being asked to describe it he immediately recognized the flower and knew from his old bouquet-making experience that it was white and yellow, but he now for the first time also became aware of the little red band in the centre, and at once called attention to it. When he was shown a bunch of daffodils he recognized them by their smell and immediately said that they must be yellow. The color that took him longest to master was green, but he can now name all ordinary tints readily and correctly. His difficulty with green is hard to explain

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unless it be that with green he has no smell-association such as he had with colored flowers. Unlike Locke's blind man, who imagined that "scarlet was like the sound of a trumpet," he does not seem to connect any distinct ideas with particular colors except that he said that red gave him a feeling of pleasure, and that the first time he saw yellow he became so sick that he thought he would vomit. The latter feeling, however, has never recurred.

He rapidly learned the letters of the alphabet, and figures, and he will soon be able to read and to reckon. From the very first he saw everything in its actual position, showing that the retinal inversion of a picture is interpreted psychically without any education.

One of the things that gave him peculiar pleasure was looking at the face of a watch which he had borrowed from a fellow patient. Within a day or two of his having got the loan of it he astonished me by announcing that he was able to tell the time. When I asked him how he had learned so quickly, he explained that he did not understand the figures on the dial, but he had been told how to count the hours, and that each space between the "black marks" meant five minutes. When asked to distinguish between a ball and a toy brick he looked at them attentively for a considerable time, his hands meanwhile moving nervously, as if he were trying to translate what he saw by comparing it with an imaginary tactile impression, and then he described both correctly. He explained that he was so much in the habit of handling objects that he had come to have a "notion in his mind" regarding the form of things. He could count accurately after he had looked at objects one by one and seemed to derive much help in his calculations by pointing with his finger. Here again he seems to translate touch into vision and to arrive at a perception of the whole through the perception of the individual parts. He cannot take things in at a glance. He does not see the passers-by on the opposite side of the street quickly. He looks most intently and moves his head backwards and forwards and from side to side as if trying to get a view of them all round before he can make up his mind what he is seeing; in a room, however, he can distinguish things much more quickly. With any complex outline, however, or group of outlines, he still has considerable difficulty, though pictures are no longer to him, as they were at first, mere masses of confused color.

He was able to estimate size and distance more readily than might have been anticipated, although he said that he felt that if he were out of doors by himself he would be "wandered." From the time he got out of bed after the operation he could guide himself with ease through a doorway and walk about on

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the level, but he had considerable difficulty in ascending a stair, because the steps seemed so high that to begin with he raised his foot much farther than was necessary, and without meaning to do so, went up two steps at a time. Whenever he discovered his mistake he began to pay attention to the rise of each, and he has now no difficulty in estimating their height. This, of course, was part of his difficulty of judging distance, though when he first looked out of a window on to the street and saw the pavement below, he said that he felt that if he had a stick he should be able to touch it, and thus he had not the feeling recorded of the boy operated upon by Cheselden in 1728, who thought that all objects he saw "touched his eyes," just as he had formerly got his impressions of things by pressure against the skin. Unlike him, also, the patient did not retain his faculty of moving easily about in the dark. Before the operation he could guide himself fearlessly through a ward without coming in contact with the beds or any other obstacle that might be in the way, but since he has been able to see he says that he has lost all that feeling of confidence, and when his eyes are shut he is afraid to move, and is impelled to open them to ascertain where he is going—so much so that he does not know what he would do if he again became blind.

The squint and ocular restlessness are less pronounced than they were, but the patient has still very little control over the movements of his eyes. When he is requested to look in any particular direction he is unable to cause the oscular muscles to do what he wishes, and the balls oscillate, and one or other turns inwards to such an extent that a portion of the cornea is hidden by the inner canthus. This want of control renders it very difficult to make a satisfactory ophthalmoscopic examination, but as far as can be made out the fundus oculi is normal: indeed, the functional activity of the optic nerves since the cataracts were removed is very remarkable, and is in striking contrast to the purposeless muscular movements. Disuse has crippled the function of the latter, but seems to have have had but little effect on the activity of the former. The eye is a receptive organ and the light that gained access to the retina through the opaque lens proved stimulus sufficient to maintain the optic nerve in health, while the want of visual power deprived the coördinating centre in the brain of all stimulus to develop, and hence the ocular muscles are not trained to obey the dictates of the will.

I am indebted to Mr. W. G. MacDonald, one of my students for bringing this case under my notice.—*The Lancet.*

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# Progress of Medical Science.

## MEDICINE.

IN CHARGE OF W. H. B. AIKINS, T. M. McMAHON, H. J. HAMILTON, AND INGERSOLL OLMSTED.

**Aneurysmal and Periaortic Pains.** By DOCTOR SERGIO PANSINI, of Naples.

The author refers to several illustrative cases which he had published, and which prove that the pains depend on injury of the periaortic plexus. He then proceeds to a study of the various kinds of pain that present themselves in cases of aneurysm.

Thoracic aneurysms give rise to two kinds of pains (*a*) those due to direct compression, and (*b*) radiating pains.

(*a*) The former depend on the direct injury done by the aneurysm to the adjacent organs. Of these the only sensitive ones in the chest are the pleura, the intercostal nerves and the bones. Pleuritic pains are rare, as the aneurysms develop slowly. Injuries to the intercostal nerves do not occur without coincident destruction of the ribs. We have to deal, therefor, only with pains due to pressure on, and consequent destruction of, the bony walls of the thorax. These "bony" pains, caused by the aneurysm, are due in a particular manner to irritation of the periosteum, that tissue of the bone richly supplied with nerve filaments. In contrast with the radiating pains, the bony pains are more frequently continuous, heavy, deep-seated, limited in extent. These, too, are occasionally intermittent. The pressure caused by the aneurysm varies according to the internal pressure of the sac (and this depends directly on the blood-pressure, and on the various conditions which modify the latter) and also the thickness of the sac-walls. Although we frequently see an aneurysm enlarge, we not rarely see one preserve its size unchanged, and sometimes see one, under appropriate treatment, and even with only a strict hygienic regimen, somewhat diminished. In microscopical sections of the walls, we are at times amazed on discovering throughout the whole thickness of the sac, a rich vascular network, newly formed—whose function must be either to prevent the mortification of the clots or to re-absorb a portion of them. It thus happens that the phenomena of pressure are in a certain degree variable. We can thus understand how the bony pains, though differentiated from those truly nervous by the characteristic of continuity, are only relatively so.

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Head insists strongly that the local pains, or those of compression, diminish with direct pressure. I do not say that this cannot happen, but it must be in very rare cases. From our experience it is rather the contrary that happens—that on the seat of the extending aneurysm there is often sensitiveness to pain on pressure. In some cases the patients cannot bear slight percussion or even palpation. This is found chiefly in aneurysms of rapid growth. Rather is it true that that pain is limited to the seat of the aneurysm or somewhat beyond; and this is not constantly so, as in more than one case, the patients have described the pain as starting from the aneurysm and radiating beyond it.

But it is also to be noted, that there are cases in which the patients have not been aware of the presence of an aneurysm until they have seen a pulsating swelling on the sternum, or in the region of the ribs, or when the osseo-cartilaginous walls were already ulcerating. As a result of close questioning of such patients, it has been found that pains were absent, or so light that they were unnoticed. We have, therefore, been convinced that the so-called local pain is, at least in part, not a pain of the thoracic walls but a pain of the aneurysm walls, or rather of the walls of the ruptured artery; whether this is the visceral or splanchnic pain due to the injured nerves of the artery, whose external correlative is the radiating pain,—that is the chief object of this study.

However, it would be a grave error if, in the presence of a pain situated in some part of the walls of the chest, the physician were not to search first of all, in the region affected, for the origin of the pain; and it would be a serious oversight, if in the presence of a continuous pain in the walls of the chest, he were not to consider the possibility of an aneurysm, especially if that pain corresponded with one of the favorite seats of aortic aneursym, namely, the sternal, the anterior costal and the left dorsal regions. When the pains in the dorsal or vertebral region are diffused towards the left dorsal region, special attention must be paid to them. As we know, an expansion of aortic aneurysm on the lateral walls is not possible, owing to the presence of the lungs. On the right posterior wall it cannot occur without symptoms of compression, especially of the superior vena cava, which cannot easily pass unobserved In this position, aneurysm is a rarity. Schrötter had one case, which was published by Weinberger and Weiss, and one occurred in my own practice during the past year. (I shall make this the subject of a separate paper). It is on the left posterior thoracic wall that aneurysms occur, which easily remain undiscovered on examination, and which are found only on autopsy, whether aneurysms of the left angle of

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the arch or those of the descending thoracic aorta. Whether the pain be in the left median and dorsal region or in the median and antero-lateral regions, careful search must be made for any visible pulsation; let the respiration be suspended and search be made for any abnormal pulsation, by palpation. If the pain be posterior, let one not overlook Baccelli's method, that of bimanual palpation. Special attention must also be paid to abnormal dulness, particularly in the sternal region, and also to unusual strength of the arterial tone, not otherwise explicable.

(*b*) We come now to the *radiating* pains, and we shall seek to determine their seat, extent, form, duration, course and frequency.

1. They are usually *occipito-cervico-scapulo-brachial*; sometimes *facial;* sometimes *intercostal* and *precordial.* The occipito-cervico-brachial type is the most frequent. Lewachow was the first to call attention to the occipital pains. Both the brachial and the cervico-occipital neuralgias are very rare, and the occipital particularly. (Erb, Gowers). Iastrowitz calculates that genuine occipital neuralgia represents about 1.9% of the neuralgias in general and justly observes that if it seems more frequent, that depends on its being symptomatic of quite different affections, as those of the cerebellum, the vertebræ, the meninges, myalgias, posterior migraines, otalgias, and even injuries in the neck to the auricular branch of the vagus. Erb notes that occipital neuralgia, besides being diffused towards the neck and the arm, is diffused towards the parietal and frontal regions more often than towards the ear, and towards the cheek and the lower jaw as far as the chin. This second diffusion we have frequently found, and as is to be inferred from reported cases, we must recognize the existence of a facial aneurysmal neuralgia and of an aneurysmal headache.

Genuine or idiopathic brachial neuralgia is not frequent, while as Erb observes, brachial neuralgias are frequently found with *angina.* Erb adds that brachial neuralgia is more often found in women than in men, and in anemic and hysterical subjects.

*Intercostal* neuralgia is more rare. In our cases, when it was present, it was for the most part bilateral.

*Precordial* pain is most frequent; wanting often at the commencement, but never in the course of the disease, if we understand it in the wider sense, as applying not only to pronounced pain but to cardiac oppression.

These neuralgias alternate in a certain measure: occipital neuralgias become cervical and brachial. Their diffusion and extension is preferably from one region to another of the same side, rather than from one region to a similar one on the opposite

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side. They may be bilateral, but they are always prevalent on one side.

2. They are of *varying intensity*, but are usually in the first stage of the aneurysm of notable intensity, and of a type now lacerating, now (and this is most frequent) excruciating or burning. *They are frequently accompanied by a pricking sensation and numbness.* These sensations are felt usually in the arm, at the elbow, sometimes in the neck.

3. In no case have we observed objective disturbances of sensibility, in the sense of diminution of sensibility to touch, puncture, heat, cold. We have not found in the affected parts any hyperesthetic zones. On this point new observations must be made, as the hyperesthetic zones of Head have been so fully proven by other facts, that we must accept them.

4. Contrary to the teaching of Head, these neuralgias are accompanied by *real painful points*, the most important of which I have already mentioned, occipital, mastoid, subauricular, cervical, supra- and subspinous, brachial. The presence of these points is important for two reasons: (1) Because it is a characteristic worth ascertaining and proves that the presence of these painful points is not exclusively characteristic of direct neuralgias, but also of radiating neuralgias; (2) because it proves that the place of pain is deep-seated, whether in the bone, muscle or fascia.

5. These pains are clearly paroxysmal and preferably nocturnal. This is why they are mistaken for syphilitic or rheumatic pains, especially as they are often manifested after ordinary rheumatic causes.

6. They are never accompanied by paralysis or muscular atrophy—there is a slight trace of numbness at the height of the attacks, just as in angina pectoris.

7. They are soon, if not at the beginning, accompanied by a feeling of cardiac or epigastric distress, with troublesome cough, dyspnea, hoarseness, sometimes vomiting, and often paralysis of the recurrent. In other words, the phenomena characteristic of angina soon present themselves, occasionally typical attacks of angina pectoris. This alone ought to prove that these pains are *anginous.*

8. They are wont to be manifested from the beginning of the disease—the chief diagnostic importance of this symptom. Cardarelli wrote: "Often, before the aneurism reveals itself by physical signs, one is led to suspect it by such symptomatic manifestations." Huchard recently confirms the same opinion that for a long time these pains are the only symptom of aneurism. They occur among the earliest signs in most of the cases. (The author then refers in detail to eight of the cases reported by him, in which these pains were the only indications

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of the disease for varying periods from nine months to eight years, before any physical signs appeared.) Really then, the radiating pains are a premonitory symptom of aneurism, and sometimes the earliest and even the only one for a certain period of time.

9. From our observations we can affirm that these pains are not only frequent, but very frequent. Examining the material of 34 aneurisms of the thoracic aorta observed in our hospitals during eight years, I find that these pains were found in 24 cases or in the proportion of 75 per cent. The same inference is drawn from the records of cases in private practice.

10. Finally, they are little benefited by the ordinary anti-rheumatic remedies, but are relieved by rest, morphine, large doses of iodide and sometimes, as in Case 1, by mercurial preparations.—*Translated from Giornale Internazionale delle Scienze Mediche, by* HARLEY SMITH.

(*To be continued.*)

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## SURGERY.

IN CHARGE OF EDMUND E. KING AND HERBERT A. BRUCE.

### Resection of the Knee without Opening the Joint.

G. Marion (*Arch. Gen. de Med.*, February 17th, 1903) is astonished that the present method of resecting tuberculous knee-joints is not attended by more relapses, seeing that the healthy tissues are divided by a knife previously inoculated by the tuberculous foci. To avoid this he has devised a method of removing the whole joint without opening it, and has performed the operation nine times. He acknowledges that Wolkowitch adopted the same principles in 1896, but employed a different method. Marion's operation is divided into six stages: 1. The classical curved incision, commencing high up laterally, and passing well below the tubercle of the tibia, is made; the skin only is dissected up, and the dissection is carried to well above the upper limit of the subcrural pouch. The ligamentum patellae is divided one cm. above the tubercle and the incision extended along the lateral fascial expansions. The periosteum of the tibia, just above the tubercle, is divided horizontally, and this serves as a valuable landmark with regard to the level to which the dissection of the soft parts from the popliteal space should be made before section of the tibia. 2. The quadriceps is divided above the patella with a curved incision until the plane between it and the synovial

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pouch is reached: the muscle is then separated in this plane from the diseased synovial tissue as far as its upper limit, when the middle fibres inserted into it are divided with a knife. The separation of the pouch from the anterior surface of the femur is easily made with the finger or a blunt instrument. 3. The femur is divided, after protecting the soft parts in the popliteal space by a flat retractor passed behind the bone, by a narrow saw with a movable back, so as to leave a V-shaped end. The section is made anteriorly at the upper level of the synovial pouch, and is carried obliquely downwards and backwards towards the condyles: posteriorly at the same level in the popliteal space, and is carried forwards and downwards to a point where the former terminated. 4. In the middle line the popliteal vessels and nerves are easily separated with the fingers, laterally the muscles are cut long, for fear of wounding the joint. The dissection is continued to the level on the tibia marked in (1). 5. The tibia is divided so that the upper part is shaped like an inverted Λ, to be received into the angle formed in the femur. 6. The tourniquet is removed and all hemorrhage controlled. No bone sutures are used. The soft parts are carefully sutured, especially the ligamentum patella, to the quadriceps. A drainage tube is inserted between the bones and the contents of the popliteal space. In spite of all precautions a tuberculous focus may be encountered, (*a*) by inadvertently opening the synovial sac, (*b*) incising a fistula or synovial extension, (*c*) by sawing through a focus in the bones. In these cases even the chances of infection are reduced to a minimum, and it is only necessary to change the instrument. Obviously any infected tissue not dealt with by this method is removed by fresh section of bone or dissection. The dressings are removed on the twenty-fifth or thirtieth day, when the drainage tube is removed. It is most important that the parts be immobilized for several months. Nine cases are cited: in one, suppuration necessitated amputation; in another, a synovial diverticulum could not be dissected out and was cauterized, and the patient died several hours later of general tuberculosis. The remaining seven were completely cured. Consolidation of bone occurred in two to six months, except in one case, where the patient removed the immobilizing apparatus. The cases were observed two to three years after operation. A superficial fistula occurred in one case three years after operation, but no further details are given. Marion claims that (1) that the results are at least as favorable as those by the ordinary method; (2) in no case has the immediate reproduction of tuberculous foci occurred; (3) the consolidation is unaffected by the removal of the peri-articular fibrous tissue proving as firm and as rapid. The objection to this method is that it sacrifices six to

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seven per cent. of the limb; this can be remedied by a high boot and tilting of the pelvis. It should be reserved for cases where the bones are affected, as shown by marked tenderness and enlargement. He does not employ it when the synovial membrane only is involved, in which case synovectomy or arthrectomy are indicated.

(In tuberculous conditions of the knee-joint, which necessitates resection, one of the most serious complications is reinfection. We have looked upon the method above described as one that will be of great advantage in this line of surgery. The details of the operation are so completely given, and the description so lucid, that we have taken the privilege of copying it in its entirety. While the operation is undoubtedly young, at the same time the proportion of cures is exceedingly good, and we look forward to this as being a well accepted procedure.)

**Suture of Wounds of the Heart.**

At a meeting of the Societa Lancisiana degli Ospedali di Roma on January 24th (*II Policlinico: Sezione Pratica*, February 14th, 1903) P. Milesi reported a case of suture of a wound of the heart. The patient, a man aged twenty-five, was admitted into the Santi Antonio Hospital half an hour after being stabbed with a knife in the left side of the chest. He was in a state of extreme collapse, unconscious, and passing urine and fæces involuntarily. The radial pulse was imperceptible. Respiration was frequent and superficial. At the upper border of the left sixth rib, one and a half cm. from the edge of the sternum there was a wound two and a half cm. in length, from which black blood was oozing. Light percussion of the heart area did not reveal any increase of dullness; on auscultation the heart sounds could be heard very faint, but unaccompanied by murmurs. There was no effusion into the pleura. The sixth rib was resected to the extent of four cm. for exploratory purposes. Then an incision reaching down to the costal cartilage was made from the insertion of the sixth rib on the left, upwards along the margin of the sternum to the upper border of the fourth rib; it was then directed outwards along the third intercostal space nearly to the outer edge of the pectoralis major. The fifth and fourth ribs were cut through with the periosteotome, and the intercostal muscles in the fifth, fourth and third spaces divided. The upper border of the flap measured seven cm. and the lower six cm., the sternal edge being 8 cm. in length. The wound in the pericardium was enlarged with forceps to the extent of six cm.; the opening gave exit to an enormous quantity of blood, and a penetrating wound of the right ventricle about a centimetre and a half in length was seen. To check the bleeding, Milesi compressed the

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edges of the wound in the cardiac wall between his thumb and forefinger; he then passed a silk suture through the whole thickness of the wall at the middle part of the wound and tied it. This stopped the bleeding almost entirely, but for greater security three other superficial sutures were inserted. After careful toilette of the pericardial cavity, the pericardium itself was stitched up with single sutures except at the lower part, where a tiny piece of iodoform gauze was left between the edges of the pericardial wound. After toilette of the pleural cavity the thoracic flap was replaced in position and fixed with a double row of sutures. Another piece of gauze was left in the pleura, both it and the one in the pericardium projecting through the space left by the resection of the sixth rib. After the operation, which lasted forty-five minutes, auto transfusion was carried out and normal saline solution and stimulant agents were injected. The patient rallied, his radial pulse could be felt, and he was able to answer a judicial interrogatory with perfect clearness of mind. Soon, however, increasing weakness became manifest, and death occurred fifteen hours after the operation. At the necropsy the pericardial sac was found clean, and the suture of the heart perfect. In addition to the wound of the right ventricular wall, one of the musculi papillares was found to be severed, and there was a perforating wound of the intra-ventricular septum measuring eight millimetres in length. At the same meeting, G. Pacori related another case of suture of a wound of the heart; the patient, a man of forty-five years, died during the operation.

**Experiments in Heart Suture.**

Merrill Ricketts, of Cincinnati (reprint of a paper read before the Western Surgical and Gynecological Association, Chicago, in December, 1901) record the results of an experimental research on suture of wounds of the heart. Twenty-five dogs were used in the experiment. Penetrating and non-penetrating wounds of the heart were made and closed with sutures of different material. Interrupted silk sutures were found to be the best. No special aseptic precautions were taken, as all pathological conditions were desired. Ricketts found that the pericardium may be entirely removed without death resulting. Either of the coronary arteries may be ligated at its base without producing death. In a certain class of cases he says it is best to suture the pericardium to the chest wall that drainage may be perfect. It is ideal to suture during systole, but one may be satisfied to secure perfect suturing in systole or diastole. Even though the auricular is thinner than the ventricular wall, it may be sutured with equal success. Owing to this difference in thickness, the percentage of penetrating

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wounds of the auricles is much greater than those of the ventricules. Knotting of the sutures should be firmly secured, otherwise they may become untied by the constant action of the heart. The sutures should pass through the bottom of the wound when non-penetrating, and through the endocardium when panetrating. If not from the latter the wound may become enlarged from within. Sutures should not be made tight enough to cut the heart tissue. The mortality is less in wounds of the right than those of the left auricle and ventricle. Bleeding is more severe in wounds from sharp instruments than when due to bullets. Among his conclusions are the following: Injuries and diseases of the heart may be dealt with on the same surgical principles as other parts of the body. The application of surgical principles in certain cases of aneurysm of the heart will, no doubt, be accomplished by suture, electrolysis, or the injection of gelatine or something of a similar character. A cardiac abscess should be incised and drained. Tumors of a pedunculated character on the external surface of the heart can and should be removed. Pedunculated tumours with the cardiac chambers can also be successfully removed. Parasitic cysts (animal or vegetable) when upon the external surface of the heart or in its wall should be incised and drained. Mitral stenosis, hypertrophy, and dilatation of the heart, will, sooner or later, find complete or partial relief within the domain of surgery. Injuries involving the myocardium are subject to the same surgical principles as injuries to other important organs of the human body. Lacerated or incised, penetrating or non-penetrating wounds of the heart should be sutured. Suturing or any other surgical procedure should not be discontinued because the heart may cease to pulsate. The work can and should be completed within a much shorter time on a quiescent heart. All means should be resorted to, while the suturing of the myocardium is being completed, to re-establish the heart's action. Drainage of the pericardial sac is necessary in many cases of injury of the heart. Exploratory incision of the pericardial cavity and its contents has been shown by both experimental research and operations upon the living human body to be exceedingly rational, valuable and justifiable. Exploration of the heart itself by puncturing it with a needle or knife to localize a foreign body, or to detect pathological conditions within the myocardium or its chambers, will at no far distant day be found useful, necessary and recognized as an accepted surgical procedure. Ricketts bases this hope on the fact that nine of twenty-seven cases that have been recorded of heart wounds treated by suture have recovered.

(Within the past three years surgery of the heart has come

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somewhat to the front, and, in all probability, the experiments that have been carried on will lead us to a more systematic resort to surgery in accidents involving the heart, that has heretofore been in vogue. We have reprinted the above article as being up-to-date, and exceedingly thorough in its detail).

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## LARYNGOLOGY AND RHINOLOGY.

IN CHARGE OF J. PRICE-BROWN.

### Deformity from the Injection of Paraffin.

Holbrook Curtis (*Laryngoscope*, April, 1903) presented at the New York Academy of Medicine a young lady who had been operated upon by the injection of paraffin for the removal of a depression at the junction of the lip and nose. This had been done by a physician who claimed to be skilled in the injection of paraffin for the removal of deformities wherever situated. In this instance the paraffin had escaped, and had made two tumefactions on the sides of the nose and border of the orbits, producing an exceedingly unsightly effect. The question was, how could this be best removed?

### Dislocation of Bones of Nose due to Polypi.

Kelson (*Jour. Lar., Rhin. and Otol.*, May, 1903) showed a case occurring in a man aged sixty years. The patient had suffered from nasal polypi for fifteen years and nasal deformity for six years. The left nasal bone was separated from the frontal, ethmoid and superior maxilla, and was perforated from pressure. The patient had no headache, and only slight mucopurulent discharge.

### Operation for Relief of almost complete Adhesion of Soft Palate to Posterior Pharyngeal Wall, the Result of Tertiary Syphilis.

Herbert Tilley (*Jour. Lar., Rhin. and Otol.*, May, 1903). In this case—female, aged twenty-three years—two operations to afford relief had already been performed, but had been entirely unsuccessful. Fearing free hemorrhage during operation, laryngotomy was first done. The soft palate was then completely separated from the pharyngeal wall, and a strong silver wire passed from before backwards through one side of the soft palate close to its junction with the hard palate, and about half an inch from the middle line. The distal end of the wire was then made to re-pierce the soft palate close to its fore-



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margin, and from behind forwards. By this means a short segment of the wire rested on the posterior surface of the soft palate. The free ends of the wire were then passed from behind forwards and attached to the corresponding incisor tooth and cut off short. A similar procedure was then adopted on the other side of the palate.

One of the wires cut its way out in about ten days, and the other in a fortnight, but healing of the raw posterior side of the palate had partly taken place, and a considerable opening remained. This was stretched each day for three weeks by the house surgeon, passing a finger up behind the palate and exercising traction. Three weeks after all treatment was over the result seemed to be excellent.

### Adenoma of Palate.

Gordon King (*Orleans Parish Medical Journal*, March, 1903) gives the history of two cases occurring in negroes. The first, male, aged forty-six years, had large smooth circumscribed tumor in right half of soft palate. The growth was enucleated through a vertical incision. The second was in a woman aged twenty-five years. The tumor occupied the left tonsillar region. This was also removed through a crucial incision under cocaine anesthesia.

### The Treatment of Syphilitic Disease of Mucous Membrane of Mouth and Throat.

Anton Lieven, of Aix-la-Chapelle (*Journal of Laryngology, Rhinology and Otology*, May, 1903). This is a long article translated by A. J. Hutchison, and is confined to the systemic and topical treatment in the secondary and tertiary stages. In both conditions he looks upon mercury as the sheet anchor to be relied on. Of the three methods of administering the drug—by the mouth, hypodermically and by inunction—he considers the first as the least effectual, and the second as by far the most valuable method. The hypodermic injections are given in two forms—either the injection daily, or on every second day, of a solution of a soluble salt of mercury; or the injection of an insoluble salt in the nates, in the hope of gradual absorption. Of the soluble salts he prefers hydrargyrum succinimidatum; of the insoluble salts, calomel. The third method, by inunction, he does not consider to be any better than the second, although he allows that it is the most active of the three methods in producing results, and in Germany may have the largest following. The plan is, on appearance of secondary symptoms, to give a large number of daily inunctions, then to give the patient a rest for six months, repeat the treatment, another rest, and so on until three or four series of treatments have been given. During the second

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year, iodide of potassium is given also in pretty large doses. It is useful in removing the pains in the head and bones as well as in reducing fever. It possesses no power to kill the bacillus of syphilis, but acts as an absorbefacient; and hence is of use in treating gummata.

In the recurrence of secondary lesions of mouth, tongue and throat, the mercurials sometimes lose their effect, and in these cases the administration of large doses of the iodides is often followed by a cessation of the attacks.

Of local applications to the plaques he considers chromic acid, sixty to ninety per cent., as the best treatment, the patient's mouth in the meantime being washed out every half-hour with some cleansing antiseptic fluid.

In tertiary conditions of all kinds, he advises large doses of iodides, giving from three to ten grammes per day, according to the conditions.

Of the preparations which are taking the place of iodide of potassium, he instances iodalbacid and iodipin. He also advises the use of sarsaparilla, as an addition to the mercurial and iodide treatment.

### Chronic Edema of Tongue—Amyloid.

Dundas Grant (*Jour. Lar., Rhin. and Otol.*, May, 1903) gives the history of a case occurring in a woman aged forty-five years. The condition had existed for twelve months. There was some difficulty in swallowing, but no pain. There was also slight hoarseness; the larynx was the seat of a pale, somewhat solid edema of epiglottis and aryepiglottic folds; the cords were normal and mobile, though the left one was restricted in its excursions. There was no ulceration, but the palate and pillars of the fauces, especially the left one, were somewhat thickened.

The patient had been losing flesh for three years, and had lost color likewise. There was no albumen in urine, no history of prolonged suppuration, no suppurating gingivitis, no evidence of tuberculosis or specific disease, no enlargement of glands; the spleen was perceptible and liver dulness considerable. The growth was believed to be one of amyloid enlargement.

### Sore Throat due to the Pneumo-Bacillus of Friedlander.

Nicolle and Hebert (*La Presse Med.*, May, 1902). The pneumo-bacillus of Friedlander is rarely found in the throat, even in the saprophytic condition. These writers found it twenty-four times in 3,670 specimens of pharyngeal exudation examined in their laboratory. In eleven of the cases it appeared to play an important part in the production of false membrane. Twenty-two cases have now been reported in all,

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in which this bacillus produced sore throat with false membrane, resembling diphtheria in appearance, but not in symptoms. They specially report the following case: A child, aged twelve years, complained of pricking in the throat. There was a whitish diphtheritic patch on one tonsil. Next day there was false membrane, tough, adherent, with bleeding surface on removal. No symptoms except slight throat discomfort, no fever, pulse normal, no eruptions, good appetite, false membrane coated for several weeks without spreading. Then it disappeared. Pathological examination revealed Friedlander's pneumo-bacillus, but no Klebs-Loeffler.

### The Results of Treatment of Laryngeal Cancer by Means of the X-rays

Bryson Delavany (*Laryngoscope*, Dec., 1902,) says that after careful investigation he has failed to find a single case of carcinoma of the larynx reported as cured by the use of the X-ray treatment. Still he considers the treatment justifiable in average cases, as preliminary to surgical operation, as it may retard the advancement of the disease, while preparation is being made for radical excision.

### On Thyroid Grafts.

Christiani (*Revue Méd. de la Suisse Romande*, Oct. 1902.) The writer, in previous papers, reported the results of experiments upon birds and reptiles, and showed that it was possible not only to get thyroid grafts take, and become organized, but also to hypertrophy. He followed some of his grafts up for five years, and found them true, active thyroid glands. He found that, as the thyroid, to perform its function, requires an immense blood supply in proportion to its size, the smaller the graft the better would be the result.

In man the only form of grafting justifiable is subcutaneous —and the chances are greater if taken from man. It is always best to have a minute piece of thyroid taken from a healthy human gland—something easily accomplished where operations upon the neck are common.

The patient having been prepared by a course of thyroid feeding, several small incisions are made through the skin. Then with a blunt-pointed instrument, little pockets are burrowed in the subcutaneous tissue. Six or eight may be made, radiating from each incision—and into the bottom of each pocket is placed a small piece of healthy thyroid gland, about the size of a grain of wheat. The supposition is, that the pieces being small, they can be readily supplied with blood from the surrounding tissue, and by this means be converted into small, active, thyroid glands. Further details are promised later.

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# OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD, K. C. McILWRAITH, AND HELEN MACMURCHY.

## The Treatment of Septic Infections with Intravenous Collargolum Injections.

The *New England Medical Monthly* for April has an article on the above by Dr. Credé, Surgeon-in-Chief to the Dresden-Johannstadt Municipal Hospital.

"The intravenous injection of collargolum by no means does away with the use of unguentum Credé; on the contrary the great majority of the cases can be cured by ointment inunction, which is more readily employed and more agreeable to the patient. But where the skin is not sufficiently absorptive, where inunctions are painful, and where the infection is so virulent that the greatest possible rapidity and energy of action is required, the intravenous injections are indicated. . . . The syringe, which should hold from 5 to 10 grammes (1¼ to 2½ drams), should not be cleansed with chemical solutions, but should be sterilized by boiling followed by distilled water or alcohol. . . . A few drops of the new collargolum in water should give a nice clear brown color; while the decomposed collargolum gives a turbid, grey emulsion. . . . The technique of the intravenous injection in subjects with well filled visible veins is extremely simple. A bandage or handkerchief is tied around the pendant arm tight enough to render the veins at the elbow tense and swollen. The detached needle is inserted through the cleansed skin into the vessel, the flow of blood shewing when its point is free within the vein. The canula is steadied with the left hand, and the syringe, not quite filled with the silver solution, is attached; a small amount of blood is then drawn up into the solution, so that any air bubble that may be present rises to the top of the fluid and is not injected. During the injection the arm is steadied in a horizontal position to facilitate the rising of the air. Introduction of the needle attached to the syringe, and determining the fact of its introduction into the vien by the mobility of its point is liable to occasion error. . . . Collargolum is not absorbed when employed subcutaneously; but it may possibly be absorbed when injected into very vascular muscular tissue. . . . The solubility of the improved collargolum allows the use of a 2 per cent. solution; so tbat 2 to 10 cubic centimetres (½ to 2½ drams) or 0·08 to 0·12 grams (1⅕ to 1⅘ grains) suffices for an injection. When the collargolum is employed in time, before the brain and heart have lost their powers of resistance, and before metastases have occurred, there is a plain improvement in a few

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hours after its introduction into the blood. The patient becomes quieter, and feels better; sweating may set in, and the pulse and temperature improve. In severe cases the improvement may be short and transitory, and the injection must be repeated in eight to twelve hours; but it usually persists for from twenty-four to thirty-six hours, about as long as the silver remains in the body. The quicker the improvement disappears the sooner must the silver be given again and the larger the dose required. . . . Cumulative action does not occur; as many as twenty injections have been given to one patient, though Credé himself never gave more than seven. Credé puts on record the fact that neither in his own extensive experience nor in that of others has there ever been any mishap from the intravenous collargolum injection; there has been no undesirable general reaction, nor any trouble from the local puncture of the vein. . . . The cases include severe phlegman and gangrene, general sepsis, puerperal fever, pyemia, septic osteomyelitis, septic polyarthritis, ulcerative endocarditis, severe erysipelas, peritonitis, erythema uodosum, anthrax and hopeless cases of phthisis. Those that had still powers of resistance got well almost without exception. K. C. M.

**Acute Hydramnios.**

Dr. W. E. Fothergill, of Manchester, exhibited, at a recent meeting of the North of England Obstetrical and Gynecological Society, the placenta from a case of acute hydramnios which terminated in the birth of quadruplets. Labour came on at the thirty-second week. The children all died within twenty-four hours of birth.

**Uterine Inertia in the First Stage of Labour. Embolism. Fatal Result.**

The patient had previously had the left ovary removed and passed safely through her third pregnancy to term, the membranes rupturing early. Complete uterine inertia followed, without any other symptom. The fatal heart giving warning that it was time to interfere on behalf of the child, labour was concluded by dilating the cervix with Barnes' bag and the application of forceps. But little blood was lost and the patient did not appear unduly exhausted. As the attending physician was about to take his leave, the patient complained of a choking sensation and said she felt that death was impending. She was very pallid and the pulse was rapid, none of the remedies administered had any effect and death took place six and one-half hours after delivery. No autopsy was permitted, but the fatal result was thought to be due to embolism.

[Case reported by Dr. Marshall, of Glasgow.]

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**The Surgical Treatment of Puerperal Pyemia.**

A paper on this subject is contributed to the *Lancet* of April 11th, 1903, by Ernst Michels, M.D., Berlin, F.R.C.S., Eng., Surgeon to the German Hospital, Dalston, London. Dr. Michel's case is probably the first successful case in Britain where the method of ligaturing one of the main venous trunks connecting the primary seat of infection with the circulation has been employed in the treatment of pyemia. This method has been recognized for some ten or twelve years and was definitely suggested by J. C. Simpson, M.D., Edin., in a paper published in the Edinburgh Hospital Reports for 1898. Dr. Michel's patient was 28 years of age and this was her fourth pregnancy. The temperature rose to 106·4, antistreptococcic serum, subcutaneous saline injections and all other treatment proved useless, and the case assumed a hopeless aspect. A slight fulness was noticed in the left niguinal region below the navel, and guided by this appearance the surgeon made an incision from the tip of the eleventh left rib to the anterior iliac spine and thence forwards and downwards parallel to Poupart's ligament, and found that the swelling was due to the thickened and dilated ovarian vein. This was ligated below the swelling and the vein slit open and evacuated, the contents being a soft thrombus containing pus. The patient made a remarkable recovery. The temperature fell to normal within thirty-six hours and remained so. The large wound healed slowly, and the patient, who was admitted to the German Hospital on December 15th, 1902, was able to leave her bed on February 5th and left the hospital well and strong early in March, 1903. H. M.

**Salt Solution in Eclampsia.**

At a meeting of the Obstetrical Society of Philadelphia the subject of eclampsia was fully discussed. Referring to the use of normal saline solutions, Dr. Norris said: "I would like to give a word of warning as to the use of salt solution. I have found in some cases that an excessive amount of salt solution has aggravated the condition of the kidneys, has produced edema of the lungs, and helped to do the very thing which we aimed to avoid. I should place as a limit one quart of salt solution and no more until free diaphoresis, diuresis, or catharsis has occurred. When there is some edema of the lungs it should not be employed at all. I have seen edema of the lungs aggravated and the patient's serum run out of her mouth as the result of too free use of salt solution. Large amounts of salt solution are of the greatest value when *profuse* catharsis from saline purgation has occurred. K. C. M.

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# OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

## Chronic Trachoma Amenable to the X-Ray.

H. F. Cassidy and F. C. Bayne (*Journal Eye and Ear and Throat*) put a patient who had suffered from granulated lids, for nine years, and who had been treated by many specialists in Baltimore, under this treatment. The treatment was applied through the closed lids; the exposures were given at a distance of twelve inches, and a spark gap of one-sixteenth of an inch, for three minutes, repeated at first every ten days, then every five, then tri-weekly. The treatments caused excessive lacrymation which, however, diminished on successive exposures, and finally ceased. The time of exposure was gradually lengthened to five minutes, and the spark gap to one inch. After the sixth treatment the patient declared herself better—the eyes pained less, the discharge lessened, she was able to do away with her dark glasses, and could read a little. By the twentieth exposure one eye was entirely free of trachomatous granules. By the thirty-fifth exposure both eyes were free. The patient now uses her eyes constantly without discomfort.

## Re-Examination of Myopes.

In a discussion on the treatment of myopia, Dr. Schweinitz stated his belief that "every youthful myope should be suspected of a tendency to increase, and should be re-examined at regular intervals, which intervals should not exceed in length twelve months, and that at each such examination full and prolonged mydriasis should be employed."

## Eye-Strain in Youth and its Modern Treatment

A. L. Ramsey (*Med. Record*, abstracted in *Med. Review of Reviews*) has drawn the following general conclusions:—

1. Eye-strain cannot be recognized too early in youth.
2. Its scientific investigation by modern methods and its radical correction may favorably modify both physical and mental development.
3. The neglect of an existing eye-strain may in time allow it to exhaust the reserve nerve capital of the sufferer and produce untold ills both of body and mind.
4. No child should ever be allowed to begin education until it is known that its eyes are properly fitted for the work.
5. Legislative enactment should, and surely will in time, compel an eye examination of every child before it enters the public schools.
6. Teachers should also be instructed in the rudimentary steps of vision testing.
7. Tests for maladjustment of eye muscles should be made

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upon every child as thoroughly and intelligently as tests for errors of refraction are made prior to its education.

8. A knowledge of the possible effects upon mental and physical development cannot be too widely disseminated among parents and teachers.

9. The direct causal relationship between "eye-strain" and nervous diseases is too well established to-day to require further proof, or even to justify further discussion.

10. The modern methods of testing for anomalies of adjustment of eye muscles are the only ones that can furnish us with scientific and accurate information.

The time has happily passed when any oculist can instruct a patient to simply follow some object held before the eyes with the eyes, and then on that test alone give a final decision as to whether maladjustment of the eye muscles exists or does not exist. Two decades ago this was about all that anybody knew about eye muscles. To-day the mere tyro would not dare commit himself on such tests.

11. The cure of disease to-day is intelligently based on the search for its cause rather than on an indiscriminate use of drugs; and the prevention of diseases is rapidly becoming more important to the medical mind, and also to the laity, than its cure.

12. The detection of "eye-strain" in youth is an important step in preventive medicine, and the arrest of a nervous leak may save many a child from a permanent breakdown when an adult.

13. The study of facial expression and head posture is destined to become an important aid in diagnosis.

14. The governing boards of institutions for the feeble-minded, the epileptic and the insane will sooner or later be compelled to investigate more carefully and earnestly than in the past the eye conditions of their inmates.

### The Carbo-Glycerine Tampon in the Treatment of Diffused and Circumscribed Inflammation of the External Auditory Meatus.

N. Sack (*Monatschr f. Ohrenheilk*) has used this treatment exclusively for ten years. The canal is first carefully cleaned and thoroughly dried; then a tampon of cotton saturated with a ten per cent. solution of carbo-glycerine is introduced, deep into the ear. The tampon must be large enough to exert considerable pressure on the inflamed walls of the canal without, however, causing too much discomfort. It is left in the ear twenty-four hours, and is changed every day for three or four days, when most cases will be well enough to take care of themselves at home. Dr. Sack thinks no other method acts so well as this, although in severe cases leeching or incision may be needed in addition. J. T. D.

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# PEDIATRICS.

IN CHARGE OF ALLEN BAINES, W. J. GREIG, AND W. B. THISTLE.

**Diagnosis of Tubercular Peritonitis**—(KISSEL, *Arch. f, Klin, Chirurg*, Vol. LXV., Part II.)

As a result of the study of fifty-four cases of tubercular peritonitis, the author comes to the following conclusions:

1. Tubercular peritonitis is more common in children than is generally supposed.
2. It may be stated as a general rule that all cases of so-called spontaneous ascites are due to tubercular peritonitis.
3. Not infrequently the exudate in the peritoneal cavity will disappear under general tonic treatment, and the child will regain complete health.
4. In the majority of cases the onset of the disease is imperceptible. The parents first notice that the child becomes pale and thin without apparent cause.
5. The presence of a coincident serous pleurisy is strongly confirmatory of the diagnosis.
6. Thickening of the parietal peritoneum is a most valuable sign.
7. This can be readily elicited before adhesions have formed by picking up a fold of the abdominal wall and palpating the peritoneum between the thumb and finger, providing the examiner is accustomed to the palpation of the normal peritoneum.
8. In exudative peritonitis the fluid obtained by tapping is rich in albumen and has a high specific gravity.
9. In many patients who present no subjective symptoms and very few objective ones, the whole peritoneum is covered by large tubercular masses.
10. Chronic ascites due to tubercular pericarditis is rarely seen, but when it does occur it is difficult to diagnose.
11. Only in rare cases does tubercular peritonitis have an acute onset.

**Prognosis of Tubercular Peritonitis**—(*Archives*, February, 1903, by G. A. SUTHERLAND, London, Eng.)

Conclusions:

1. In uncomplicated cases the prognosis is good.
2. In tuberculous pleurisy the prognosis is also favorable.
3. Prognosis is less favorable in the case of:
   (*a*) Strong family history of tuberculosis.
   (*b*) An infancy passed under bad hygienic and dietetic conditions.

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(*c*) A constitution of feeble resisting power.
(*d*) A history of severe infective illness in early life.

4. Prognosis less favorable in the presence of one or more of the following symptoms:
(*a*) Continuous pyrexia.
(*b*) Persistent diarrhea.
(*c*) Rapid pulse.
(*d*) Recurrent acute exacerbations.

5. Also less favorable in the presence of any of the following complications:
(*a*) Tuberculous ulceration of the bowel.
(*b*) Extensive caseation of the mesenteric lymph nodes or of tubercular masses.
(*c*) Local suppuration from infection through lymph nodes or the intestines.
(*d*) Obstructive symptoms from bands or matting of the bowels.

6. Prognosis is bad in the case of the following complications:
(*a*) Rupture of a suppurating node.
(*b*) Perforation of an intestinal ulcer.
(*c*) Pulmonary tuberculosis.
(*d*) Tubercular meningitis.
(*e*) General miliary tuberculosis.

7. Prognosis not appreciably affected by simple laparotomy.

**Medical Treatment of Tubercular Peritonitis**—(*Archives*, April, 1903, by LEONARD GUTHRIE, London, Eng.)

*Laparotomy.* Of 41 cases, 14 were operated on and 7 of these died; while of 27 cases treated medically only 4 were fatal, and in 3 of these cases death was due to peritonitis (septic) due to perforation or rupture of lymph node abscess.

The author believes that these cases will recover as well without as with operation, unless some such complication be present as suppurating lymph nodes, adhesions, bands and strictures, when, of course, an operation should be performed.

*Medical treatment.* This is purely symptomatic. There is nothing unusual in his methods, unless it be the emphasis he places on absolute rest in the pure country air. He mentions a case which was sent for three weeks to the country to recuperate for an operation, but when the time arrived to return the patient was so well that operation was unnecessary.

W. J. G.

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# Editorials.

## THE COTTAGE HOSPITALS.

The "Minto Cottage Hospital" scheme is exciting much interest at present in Toronto and other cities of Ontario. We learn various particulars respecting the undertaking from the lay press. The object is to place a number of perfectly equipped cottages or pavilion hospitals in those parts of Western Canada into which immigrants are now pouring. There will, it is hoped, be so many of these useful institutions, that no settler will be farther away than half a day's drive from one of them. Each hospital will have a competent nurse in charge, who can in cases of emergency call in capable assistants.

We are told that "the West" is a land of vast distances, and passenger rates are so high that the expense prevents many at present from going to places where they can be nursed during illness. Each of the new Cottage Hospitals will be a great educational centre for its surrounding district. The general work accomplished will be as follows: All such diseases as fevers, ague and rheumatism will be cured, or at least treated; all injuries will be also treated; all the homesteaders will be educated as to the laws of hygiene relating to food and sanitation. Each Cottage Hospital will "represent a haven of rest to the newly arrived settler who lives in a small shack rudely thrown together without any attempt to do more than afford shelter for the first season."

We are assured that this "scheme was developed and put into practical working order at a most auspicious moment, and it remains for wealthy and patriotic citizens to facilitate as far as possible the progress and extension of this most admirable form of educational and philanthropic work." Some of our Canadian friends think that we have already sufficient machinery in this country for charitable purposes, and what we really need now is more oil. We have our hospitals and other charities well organized, and many think it would be more economical to give these struggling institutions money which they so much need. For instance, they say, that the moneyed men of this province would serve suffering humanity more by

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contributing to such a charity as the Free Sanitarium for Consumptives at Gravenhurst, than by giving to a new fund which will be largely expended in providing new machinery.

## LICENSURE RECIPROCITY BETWEEN STATES.

We learn from the *New York Medical Journal* that the subject of reciprocity as to licenses to practise medicine between the different States of that country is still in a very unsatisfactory position—perhaps worse even than in this country. The experience of New Jersey, which for a few years had reciprocity with a sister State has been disappointing. The State Board of Medical Examiners now reports that "as a result of this system differences repeatedly arose between the reciprocating State boards over the educational standing of the applicants." As a consequence the "differences" became so serious that even this limited reciprocity was abandoned.

This is most unfortunate and very discouraging to physicians in the United States who desire to have some system whereby a license to practise will cover the whole country. Although many suggestions have been made as to the best way of breaking down obstacles, nothing practical seems to come to the front. Great Britain was for a long time in a similar position. As Lord Lister pointed out when in Toronto in 1897, in former days a graduate from Edinburgh could not practise south of the Tweed. The present method of giving the General Medical Council of Great Britain controlling power in the matter of licensing seems to work well, although it is not satisfactory to all parties.

We in Canada hoped for great results from the passage of Dr. Roddick's Bill. The recent action of Quebec, respecting which we published an excellent editorial from the *Mail and Empire* in our last issue, is discouraging. We should not lose heart on that account, however. The French Canadians are as a rule reasonable and fair minded, but very conservative and timid about making radical changes. We believe, however, that time with necessary knowledge as to the provisions and object of the Bill will change the views of the majority in

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Quebec. We shall rely to a great extent on Dr. Roddick, who has done so much to clear up misunderstandings, between many of the provinces. May he continue his exertions until he has fully completed his work.

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## THE CARE OF FEEBLE-MINDED WOMEN.

We hope the Government of Ontario, in considering this question, will not lose sight of the fact that it is too late to begin this care in the adult life of feeble-minded persons. We would respectfully ask the Minister of Education to obtain from Inspectors and Principals of Public Schools in Ontario the number of feeble-minded children in our schools, and embody these statistics in the returns of the Education Department.

There are also such institutions as the Mimico Industrial School, the Alexandra Industrial School, and especially that department of the Andrew Mercer Reformatory, (wisely termed a school by the Government) under the Principalship of Miss Elliott, where girls who are young, and yet must evidently be detained in such an institution, are placed. We are quite certain, for instance, that the principal and officers of these schools, would be able to say whether those who have been under their charge for some years are really fit to take care of themselves.

We commend to the Government the example of the Roman Catholic Church in this regard. It was well said by Lord Macaulay that the Church of Rome is the incarnation of human wisdom, and we are informed that no girl is allowed to leave the orphanges and similar institutions of the Roman Catholic Church in Ontario who is mentally incapable of protecting herself. That church finds a place for these children, where they will be taken care of and safe. Why does not the Province follow the example? We have in Ontario some who can only misuse man's or woman's estate to their own degradation and to the degradation of society. It is evidently the duty of the State to provide guardianship for them with honest and pleasant labor for all who can work.

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In London, Leicester and Birmingham there are "After-Care Committees" of the School Boards who are working along these lines, and we hope the Government of Ontario will avail themselves of the information and experience of these committees.

There is another aspect of this question. Certainly both boys and girls who are mentally unable to take care of themselves should alike be cared for by society, unless their own families are able to take care of them. But it must be said that physicians whose work lies in certain departments of Maternity Hospitals know well how frequently their patients come there because they were mentally incapable of protecting themselves. The Government of this Province could easily get from resident officers of Maternity Hospitals such information as would amply justify them in the expenditure of public money to prevent the increase of the pauper, imbecile and criminal classes.

The expenditure of a few thousands in this generation will save the Province thrice that sum or more in the next generation.

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## THE ONTARIO MEDICAL ASSOCIATION.

In former issues we have given particulars as to the work of the committees who are making preparations for the next meeting of the Ontario Medical Association to be held June 16th, 17th and 18th. There is little to add now, excepting the fact learned from the secretary, Dr. Parsons, that several more papers have been promised. The members throughout the Province will get information as to all details in the preliminary programme which is being prepared as we go to press. The decision to hold a three days' meeting meets with general approval. We have every reason to suppose that we shall have a large and interesting meeting.

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## BANQUET OF TRINITY GRADUATING CLASS.

The graduating class of Trinity University held a banquet at the Arlington Hotel, Toronto, on the evening of May 21st. The "guests of honor" were Drs. Geikie, Temple, Sheard, Teskey and Bingham. Drs. Teskey and Bingham delivered short special addresses, while Drs. Geikie, Temple and Sheard responded to the toast to the Faculty. Dr. M. J. Perkins presided. Speeches were also delivered by Messrs. Hillis, Milne and Hodgson, representing the Fourth, Third and Second years, respectively, and also by many members of the graduating class.

## BANQUET OF WOMEN'S MEDICAL ALUMNAE.

The annual banquet of the Alumnæ Association of the Ontario Medical College for Women was held in the college building, 291 Sumach street, on the evening of May 21st. Among those present were the five graduates of this year, Dr. Eliza R. Gray, of Owen Sound, Dr. Jennie Hill, of Mitchell, recently returned from China, and the majority of women practitioners in Toronto.

## BANQUET OF THE TORONTO GRADUATING CLASS.

The graduating class of this year of the Faculty of Medicine of the University of Toronto, held a banquet at the King Edward Hotel on the evening of May 23rd. Speeches were delivered by Professor Adam Wright, the "guest of honor," E. A. Gray (the chairman), O. T. Dinnick, J. L. Biggar, R. F. Foster, Eugene De Haitre and S. C. Yin. The speeches of the last two worthy representatives of French Canada, and China, respectively, were especially interesting. In addition the hotel orchestra provided good music, and the *new* doctors sang many *jolly* songs. Altogether a most enjoyable evening was spent.

Queen's Medical Faculty, Kingston, will celebrate the jubilee of its foundation next October. The installation of the new Principal will take place at the same time.

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## DISTINGUISHED MEDICAL GRADUATES OF THE UNIVERSITY OF TORONTO.

The following medical graduates of the University of Toronto have attained marked recognition in a number of universities and colleges in the United States:

R. R. Bensley, B.A., M.B., Assistant Professor in Anatomy, University of Chicago; B. A. Cohoe, B.A., M.B., Instructor in Anatomy, Cornell University, Ithaca; B. C. H. Harvey, B.A., M.B., Associate in Anatomy, University of Chicago; V. E. Henderson, M.A., M.B., Assistant Demonstrator of Physiology, University of Pennsylvania; A. H. Montgomery, B.A., M.B., Demonstrator in Anatomy, Cornell University Medical College, Ithaca; J. B. MacCallum, B.A., M.D., Assistant in Physiology, University of California; W. G. McCallum, B.A., M.D., Associate Professor of Pathology, Johns Hopkins University, Baltimore; T. McCrae, B.A., M.B., M.R.C.P. (Lond.), Associate in Medicine, Johns Hopkins University; L. F. Barker, M.B., Professor of Anatomy, University of Chicago; N. M. Harris, M.B., M.R.C.S. (Eng.), L.R.C.P. (Lond.), Associate in Bacteriology, University of Chicago; T. B Futcher, M.B., Associate Professor of Medicine, Johns Hopkins University, Baltimore; N. B. Gwyn, M.B., Instructor in Medicine, University of Pennsylvania; T. S. Cullen, M.B., Instructor in Gynecology and Abdominal Surgery, Johns Hopkins University, Baltimore; D. G. Revell, B.A., M.B., Instructor in Anatomy, University of Chicago.

### Hyperchlorhydria, a Symposium.

The June issue of the *International Medical Magazine* will be devoted to a symposium on this most important gastric subject, than which none more important have ever been published in any American journal. More than half a dozen of the leading European specialists will contribute, among whom are Prof. C. A. Ewald, Berlin; Prof. George Hayem, of Paris; Prof. Carl von Noorden, of Frankford; Dr. L. Kuttner, of Berlin, and Prof. Rosenheim, of Berlin. The selection of contributors from this side of the Atlantic has been equally happy, and the following will take part: Prof. John C. Hemmeter, of Philadelphia, on "An Experimental and Clinical Study of the Etiology of Hyperchlorhydria"; Dr. Allen A. Jones, of Buffalo, on "The Effervescence Test for Gastric Acidity"; Dr. Boardman Reed, of Philadelphia, on "A Further Development of the Benedict Effervescent Test of Gastric Acidity"; Dr. John A. Lichty, of Pittsburg, on "The Relation between Hyperchlorhydria and Neurasthenia"; Prof. Fenton B. Turck, of Chicago, on "The Treatment of Hyperchlorhydria"; Dr. A. Robin, of Newark, Delaware, on "The Etiology of Hyperchlorhydria"; Dr. Max. Einhorn and others.



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# Personals.

Dr. James H. Cotton, Toronto, will sail for Europe, June 27th.

Dr. Francis J. Burrows, of Seaforth, is doing post-graduate work in Baltimore.

Dr. J. M. H. Gillies (Tor. '97) is engaged in post graduate work in London, England.

Professor Wm. Osler, of Baltimore, sailed from New York for England, May 27th.

Dr. T. D. Archibald (Tor. '01) of Toronto, sailed for England early in May. He is now in London.

Dr. A. M. McFaul, of Stayner, has been appointed one of the license commissioners for West Simcoe.

Dr. James F. W. Ross, of Toronto, returned from Algonquin Park, May 30th, and resumed practise June 1st.

Dr. Victor H. McWilliams (Tor. 99), of Peterborough, was married to Miss Josephine Sheppard, June 3rd.

Dr. J. M. Elder, of Montreal, has gone abroad for the summer. He reached London about the middle of May.

Dr. F. W. Marlow (Trin. '00) has passed the examinations for Fellowship of the Royal College of Surgeons, England.

Dr. Edgar Macklin, of London, Ont., is now in Edinburgh, Scotland, and will go to London, England, in a few weeks.

Dr. Arthur B. Wright (Tor. '02), has recovered from an attack of diphtheria. He left the Isolation Hospital, June 2nd.

Dr. L. M. Murray, of Halifax, has been appointed Provincial Bacteriologist for Nova Scotia, in the place of Dr. Halliday, deceased.

Dr. Alex. McPhedran, of Toronto, will start for Europe in the latter part of June. He expects to return in about two months.

Congratulations to Dr. Brefney O'Reilly, Trinity's latest medical gold medallist. Dr. Brefney will sail for England, June 20th.

Dr. Albert F. Reynar, of Palgrave, County of Peel, was severely burned by an explosion of chemicals, May 16. After the accident he remained two weeks in the Toronto General Hospital.

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Dr. W. A. Young, of Toronto, attended the meeting of the American Medical Association held in New Orleans during the first week in May.

Drs. Charles W. McLeay and Basil Harvey, of Watford, have sailed from New York for Naples. After spending a few weeks in Italy, they expect to visit Vienna, Berlin, Edinburgh and London.

Dr. V. E. Henderson (Tor. '02), Assistant Demonstrator of Physiology, University of Pennsylvania, expects to visit his relatives in Toronto in the latter part of June, and will remain about a month.

Dr. J. A. Kennedy (Trin. '00) formerly of Toronto, went to South Africa three years ago, and is now in Zululand. He was recently appointed Lieutenant-Surgeon to the Umvati Mounted Rifles, volunteer corps.

The following have become Licentiates of the Royal College of Physicians of London: F. S. Pope, E. G. Weir, graduates of the University of Toronto; E. W. Allin, M. R. Blake, graduates of the University of Trinity College.

Dr. W. Beattie Nesbitt, M.P.P., of Toronto, and Dr. Samuel M. Henry, of Harriston, delivered addresses, May 25th, at Harriston, on the occasion of the laying of the corner stone of the new Methodist Church, in that town.

Dr. Norman McLeod Harris (Tor., '94), has been appointed first assistant in Bacteriology, under Dr. E. O. Jordan, in the University of Chicago. Dr. Harris had previously occupied a similar position for some time at Johns Hopkins University, Baltimore.

Great sympathy is felt for Dr. and Mrs. Chas. J. Hastings, of Toronto, in their recent bereavement. Their son Victor, aged 7, a bright, happy and healthy boy, died from meningeal hemorrhage about forty hours after a fall on the head while at play. It is doubly sad because it is their second bereavement within a few months.

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# Obituary.

## E. H. STOWE, M.D., A PIONEER.

Dr. Emily Howard Stowe, of Toronto, who was the first woman to practise medicine in Canada, died at the residence of her son, in this city, on the 30th of April, 1903.

Dr. Stowe was born in Norwich, Ontario, and was engaged for some years in teaching, being principal of a school in Brantford before her marriage. She began to study medicine in 1865, at the New York Medical College for women, and graduated in 1868. Settling in Toronto, she built up a large practise, and took an active part in more than one movement to advance the education of women.

Her life was a busy and useful one, and her interests were wide. She was of Quaker ancestry, and possessed many of the good qualities characteristic of the members of the Society of Friends.

She won her way against all the difficulties that pioneers must meet, and her perseverance, industry and ability, as well as her personal efficiency and charm won her many friends and admirers.

## CHASE CHEVERS, M.D.

Dr. Chevers, a retired British Army Surgeon, who lived in Kemptville, a village near Brockville, for about twenty years, died May 21st, aged 79.

## CHARLES SELBY HAULTAIN, M.D., L.R.C.P., LOND.

Dr. Haultain, Assistant Surgeon to the Northwest Mounted Police, died at Battleford, N.W.T. May 21st, aged 40. He received his medical education in Trinity Medical College, Toronto, and his degree, M.D., from Trinity University. He then went to England and spent some time in London. After returning to Canada he lived in Toronto for a short time. He became attached to the Royal Grenadiers, and served with them in the Riel Rebellion. After the Batoche battle he became attached to Steele's Scouts in the pursuit of Big Bear. He then joined the Northwest Mounted Police, being appointed Assistant Surgeon, holding this commission up to the time of his death.

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# Book Reviews.

**Saunders' Medical Hand-Atlases. Atlas and Epitome of Human Histology, including Microscopic Anatomy.** By DR. J. SOBOTTA, of Wurzburg. Edited, with additions, by G. CARL HUBER, M.D., Junior Professor of Anatomy and Histology in the University of Michigan, Ann Arbor. Philadelphia and London: W. B. Saunders. Toronto: J. A. Carveth & Co.

Twenty volumes or more of this excellent series have now appeared, and that on Histology will be found equal to any of its predecessors. The text is brief, but sufficient both for the student and the general practitioner, while great pains have been taken to render the illustrations accurate and perfect in detail. Perhaps those illustrating the skin and the special sense organs are among the best.

**The Care of the Baby.** By J. P. CROZER GRIFFITH, M.D., Clinical Professor of the Diseases of Children in the University of Pennsylvania Hospital. Philadelphia, New York and London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co.

This book, which is primarily intended as a manual for mothers and nurses, will be found useful also by students and young practitioners. The present is the third edition (the first edition was issued in 1895), and it has been carefully revised and brought up-to-date. There is probably no better book of its kind.

**Practical Points in Nursing.** By EMILY A. M. STONEY, late Superintendent of the Training School for Nurses, Carney Hospital, South Boston, Mass. Philadelphia, New York, London: W. B. Saunders & Co. Toronto: J. A. Carveth & Co.

The third edition of this excellent text-book on private nursing has been thoroughly revised and a good many additions have been made, but unfortunately, not by the author, whose early death was a great loss to the nursing profession in America.

The book is eminently practical and complete, and worthy of a place in every nurse's library. The book is well illustrated, and the Dose-List, Glossary and the Appendix on Food for the Sick add much to the value of the book.

**The Journal of Tuberculosis.** A Quarterly Magazine devoted to the Prevention and Treatment of Tuberculosis. Edited by Karl von Ruck and Silvio von Ruck. Vol. V., No. 1. Asheville, N.C.: A. H. McQuilkin.

The usual Review of Current Literature, an editorial on "The Relation of Human and Bovine Tuberculosis," three original translations and six original contributions form the contents of the *Journal* for June, 1903. Of the original articles, one of the most interesting is Dr. Eisendrach's paper on "Tuberculosis of the Cervical Lymph Glands." He recommends operation unless the case is very mild, or the child is debilitated or anemic, or the family history is tuberculous,

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and there are suspicious signs at the apices of the lungs. Other articles are on "The Cinnamic Acid (Hetol) Treatment of Tuberculosis," "The Early Diagnosis of Tuberculous Laryngitis" and "The Urinary Calcium Excretion in Tuberculosis."

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**A System of Physiologic Therapeutics.** A practical exposition of the methods, other than drug-giving, useful in the prevention of disease and in the treatment of the sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College, etc., etc. Vol. V., Prophylaxis, Personal Hygiene, Civic Hygiene, Care of the Sick. By JOSEPH MCFARLAND, M.D., Philadelphia; HENRY HUFFMAN, M.D., Philadelphia; ALBERT ABRAMS, A.M., M.D., San Francisco; W. WAYNE BABCOCK, M.D., Philadelphia. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1903. Canadian Agents: Chandler & Massey, Limited, Toronto.

This volume treats especially of the "Preservation of Health and the Prevention of Disease," seeking a basis for intelligent prophylaxis in a study of morbid processes and their causation. It is an epitome of what is essentially the natural history of medicine, including the important facts thus far learned regarding the origin, dissemination and prevention of disease. Part I. is divided into four sections: 1. The Origin of Disease; 2. The Diffusion of Disease; 3. The Prevention of Disease; and section 4. Prophylaxis of Special Infections. Part II. bears upon Civic Hygiene. Part III. on Domestic and Personal Hygiene, Nursing and Care of the Sick-room. The editor deserves to take special pleasure in this volume, as it reflects the greatest credit on all concerned, and clearly proves that the subjects of prophylaxis and of treatment should always be considered together. We commend this "system" to the consideration of all careful post-graduate students and practitioners of medicine.

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**A Text-Book of the Diseases of the Ear, for Students and Practitioners.** By PROF. ADAM POLITZER, of Vienna. Translated at the personal request of the author, and edited by MILTON J. BALLIN, M.D., and CLARENCE L. HELLER, M.D. Fourth edition, revised and enlarged, with 346 original illustrations. London: Balliere, Tindall & Cox, 8 Henrietta St., Covent Garden. 1902.

Seldom have we the pleasure of giving notice in these pages of a work which merits such unstinted praise. Politzer, of Vienna, is recognized the world over as the leading authority on diseases of the ear, and a great teacher who takes infinite pains with those who attend his clinics. Canadian graduates who have studied under him, now resident in this country, will be glad to know of this new translation, and should avail themselves of the opportunity of securing a copy of this treatise, which surpasses others on this subject. The translators—Dr. Milton J. Ballin and Dr. Clarence L. Heller—have, with some assistance from Dr. Edward Law, of London, done their part splendidly. We can with confidence, knowing the author, commend this volume to all interested in aural diseases.

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# DERANGED UTERINE FUNCTIONS.

By JAMES A. BLACK, M.D.,
Hospital Department, Pennsylvania Reform School.

It is safe to say that to the average physician, who is confronted almost daily with the ordinary cases of suppressed and deranged uterine functions, no other class of cases is so uniformly disappointing in results and yields so sparing a return for the care and time devoted to their conduct.

Patients suffering from disorders of this nature are usually drawn from the middle walk of life, and, by reason of the pressure of household duties or the performance of the daily tasks incidental to their vocation, are entirely unable, in the slightest degree, to assist, by proper rest or procedure, the action of the administered remedy.

Many of these patients, too, suffer in silence for months, and even when forced by the extremity of their sufferings to the physician, shrink from relating a complete history of their condition, and absolutely refuse to submit to an examination. Authoritative medical teaching and experience unite in forcing upon the attendant a most pessimistic view of his efforts in behalf of these sufferers under such conditions.

It is in this class of practice, where almost everything depends upon the remedy alone, that a peculiarly aggravating condition of affairs exists. A very limited list of remedies of demonstrated value is presented for selection, and I believe I am not wide of the mark in saying that, in the hands of most practitioners, no remedy or combination of remedies hitherto in general use has been productive of anything but disappointment.

Some time ago my attention was drawn to Ergoapiol (Smith) as a combination of value in the treatment of a great variety of uterine disorders. Its exhibition in several cases in my hands yielded such happy results that I have used it repeatedly in a considerable variety of conditions, and with such uniformly good results that I am confirmed in the opinion that its introduction to the profession marks an era in modern Therapeutics. In the treatment of irregular menstruation and attendant conditions I have found it superior to any other emmenagogue with which I am familiar, in the following important particulars:

1. It is prompt and certain in its action.
2. It is not nauseating and is not rejected by delicate stomachs.
3. It is absolutely innocuous.
4. It occasions no unpleasant after-effects.
5. It is convenient to dispense and administer.

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The following clinical notes will afford a general idea of its action in a variety of cases:

CASE 1.—Mrs. ——— came to me presenting the following symptoms incident to a delayed menstruation: Persistent headache of a neuralgic character; dull, aching pain in limbs and lumbar region; cramp-like pains in abdomen, and considerable nausea. The menstrual period was overdue seven days, but as yet there was no appearance of flow. Her periods had always been occasions of intense suffering, but had never before been delayed. I began the use of Ergoapiol (Smith), with some misgiving owing to the irritable condition of the stomach. One capsule every three hours was administered without any aggravation of the gastric distress. In twenty hours a normal menstruation was well under way; the flow was slightly increased over that observed on former occasions. The pains had subsided. Ergoapiol (Smith) was administered, one capsule three times a day, during the menstrual period, which terminated in five days. The patient was instructed to return for a quantity of the remedy several days before the next menstrual period. She did so, and, following directions, took one capsule three times a day for three days before expected menstruation. She subsequently reported that during the period—lasting five days—there had been practically no pain, and that the amount of flow was, as far as she could judge, normal.

CASE 2.—Miss ———, aged 30, had been a sufferer for years with dysmenorrhea. For about three years had suffered with leucorrhea, particularly annoying after each menstrual period. Had undergone treatment at different times for the leucorrhea and dysmenorrhea, but had never experienced permanent benefit. She had been obliged to spend the couple of days of each period in bed. She consulted me about one week before her period. Examination revealed a purulent discharge oozing from os cervix and a rather large uterus. There was no displacement. She was put upon Ergoapiol (Smith), one capsule three times a day. The onset occurred one day earlier than was expected and was attended with considerable pain. The patient was, however, able to attend to her usual duties, a state of affairs such as had not been experienced for some years. At the onset of the flow Ergoapiol (Smith) was administered, one capsule every two hours. The effect was astonishing. In eight hours the pains had well-nigh subsided and there was practically no discomfort, except some pain in back.

CASE 3.—Miss ———, aged 21, had suffered for two years with irregular and painful menstruation. Had commenced to menstruate when 16, menses being very scanty, but regular and accompanied with but slight degree of suffering. Was never of a very robust physique, but in the main healthy. When

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about 19, considerable nervous trouble was inaugurated by grieving over a great bereavement, and the menses became more and more painful. The anguish became such a horror to her that she frequently resorted to morphine, partly to allay pain and partly to procure sleep. Fortunately she had not, as yet, contracted the habit, but the tendency was undoubtedly in that direction. When first consulted by her, examination was not granted. Menses appearing shortly afterward, was called upon to afford relief. Flow was very scanty and clotted. There were sleeplessness, terrific headache, pain in back, constipation, etc. Ergoapiol (Smith) was administered, one capsule every three hours. Flow was considerably increased, there was a gradual lessening of all the suffering, and almost complete relief in twelve hours. This young woman had been placed upon Ergoapiol (Smith), one capsule twice daily for one week preceding appearance of menses, and has passed through several periods with very little suffering. An examination made recently showed a marked retroversion and very sensitive cervix. A properly applied supporter will doubtless work considerable benefit in her case, but it cannot be disputed that the comparatively easy menstruations occurring recently, in spite of the displacement, were due entirely to Ergoapiol.

CASE 4.—Miss ———, aged 18, had always been regular in menstruating. Could get no history of any previous disorder within patient's knowledge. Contracted a heavy cold about time of menstrual epoch, and was much alarmed by non-appearance of flow. Discomfort was not marked. Ergoapiol (Smith), one capsule three times a day, was prescribed. Reported later that flow was established in twenty-four hours after treatment was commenced. The delay in this case was about four days.

CASE 5.—Mrs. ——— consulted me, giving the following history: Three months previously had had a profuse uterine hemorrhage occurring about the time of menstrual period. As she had for a number of years menstruated only at intervals of about six or seven weeks, the fact that menstruation had been suspended for six weeks before the date of trouble was not especially significant. The hemorrhage, which was at no time alarming, had continued for several days. Since that time there had been an almost constant wasting and at times a considerable flow. Her condition was practically invalid. Examination revealed a gaping os, a cervix exceedingly tender and abraded, and a large uterus. Before resorting to curettement it seemed advisable to try other measures. Ergoapiol (Smith), one capsule every three hours, was prescribed. In about twenty-four hours there was a decided increase in the discharge, which consisted of clots and considerable debris. There were some pains, of a cramp-like nature. The discharge began to

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grow less in about four days and ceased entirely in one week. There was a marked improvement in general condition. Local treatment entirely removed the tenderness and abraded condition of cervix. Ergoapiol (Smith) was administered several days before next menstrual period and resulted in a very satisfactory period. In this case it appears to me the remedy saved the patient the ordeal of curettement, acting as a prompt uterine stimulant. Her condition locally and generally has since steadily improved.

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## Do Drugs Ever "Cure"?

In the layman's mind there is absolutely no doubt of the power of drugs to produce a "cure." To cure a disease by means of a drug or a combination of drugs, seems to him no more wonderful than to patch up a piece of broken china with a little cement. The same idea existed in every physician's mind up to seventy or eighty years ago—and is still entertained by a good many old-fashioned doctors. The study of pathology changed the prevalent notion of the "curative" power of drugs; it was seen that a dose of ammonium carbonate could have no direct effect on a consolidated pneumonic lung, nor could a dose of opium produce a retrograde metamorphosis in an inflamed peritoneum. It, therefore, became fashionable to sneer at drugs as curative agents. The *vis medicatrix naturæ* does it all—without it drugs are worthless. Admitting that this is so, that the real cure is produced by Nature, do not the drugs help toward a cure, by helping Nature to exert her curative action, by removing obstacles, by clearing the sewer pipes, etc.? When a man breaks his leg and a skilful surgeon puts the fragments in proper position, applies a splint, and the fragments unite without leaving the least trace of deformity—who has produced the cure? The surgeon? He has and he hasn't. Because, without Nature's reparative process, without the callus, no surgical skill would be of any avail. We have many such instances in very old people, in whom in spite of the best treatment the fragments refuse to unite. But, on the other hand, without the fragments being put in the proper position, a great deformity may result, or the fracture may remain ununited in spite of a superabundance of Nature's reparative callus. And so it is with drugs in the hands of a skilful physician. Nature produces the cure, but drugs coax Nature to stop her mischief, tide the patient over the danger period, and thus give Nature a chance.—*Merck's Archives.*

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# Miscellaneous.

## Massage of the Heart as a Means of Resuscitation.

At a meeting of the Medical Association of the Greater City of New York, held May 11th, a paper of remarkable interest by Drs. Robert Coleman Kemp and A. W. Gardner, on "Experimental Researches on Resuscitation after Death from Chloroform," was read by Dr. Kemp. The experiments were made upon dogs, and for the first time manometric and kymographic tracings were presented in massage of the heart. At the same time, what is claimed as the first practical method for performing cardiac massage was described in the paper. This method is as follows: The animal is placed in the Nélaton (inverted) position, which throws the heart forward against the chest, and somewhat upward, An incision is made over, or slightly below, the apex. If necessary to secure more space, a small piece of the fifth and sixth ribs may be resected. The index and middle fingers are passed over the margin of the heart and behind it, near the apex, and pressure is made on the heart against the chest. Or, the opening being enlarged, the fingers may be placed behind, and the thumb between the apex and chest-wall, when the heart is rapidly squeezed between them. It was found that a rapid intermittent (double action) pressure resuscitated more cases, and in effect, imitated the dicrotism of the pulse, as is shown in the tracings. A rapid single action pressure was not as successful. This method, the authors believe, is the most rational, and by far the safest, that has as yet been devised. An important part of the procedure is the maintenance of artificial respiration, and this was accomplished by means of the Kemp-Gardner modified intubation tube and a new pump devised for the authors by Mr. Hoyt, of the physiological laboratory of the College of Physicians and Surgeons. Prolonged infusion of hot normal saline solution was also employed. Resuscitation was accomplished in eleven out of twenty-three animals, after absolute cessation of heart-action to sight, touch and compression, and this after the heart had remained in this condition for variable periods (3 to 16 minutes). The dogs lived from two to twenty-four hours, and in most of them the body functions returned to normal, and the animals became active and hard to control. The conviction was expressed that with a more perfect technique there was no reason whatever why death should occur at all.

Dr. Kemp also reported the first employment in this country of cardiac massage in a human subject. The case, however, was not one of chloroform syncope, and was unsuccessful. It was in every respect a most unfavorable one, as the patient

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was pyemic, and, in addition, weakened by several previous operations. At the time the fatal collapse occurred, Dr. Kemp had just done a simple operation not lasting over five minutes, for the opening of a large accumulation of pus in the left side of the abdomen, and nitrous oxide gas was the anesthetic employed. In conclusion, it was stated by the authors that they believed the procedure of massage of the heart to be both sound therapeutics, and perfectly justifiable in all cases of death from chloroform or any other anesthetic, as well as from drowning and allied conditions, when all other means of resuscitation have failed.—*Boston Medical and Surgical Journal.*

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**Overstudy and the Nervous School-child.**

Such are the topics earnestly discussed by societies for the study of school problems, by school superintendents, teachers, parents, physicians and by editorial writers. An eminent professor of pedagogics in a vehement address repeatedly demands that the will of the bad school-child shall be "broken" exactly as one "breaks a colt." This Rarey and cowboy type of child-breaker divides "the nervous child" into four classes: 1. With undergrade mind, well-nourished, destructive, and extremely violent when angered, and even homicidal. 2. The anemic, active, alert, overstrung boy, liable to sullenness and even epileptic fits when disciplined. 3. The highstrung oversensitive girl, so sensitive as almost to go insane in trying to do right. 4. The vicious, self-assertive, ill-tempered boy with criminal tendencies. Such ill observation as this argues the poor diagnosis and treatment we find. In some cities the nervous child is moving parents and physicians to appeal for fewer hours in the schools and less pressure. We do not much believe in the intellect, the morals, or the pedagogics of the colt-breakers or the boy-breakers. There are better ways to break a horse or a child than to break its will, and the teacher that entertains such diabolic theories should be "broken." The noteworthy fact about the whole discussion is the utter omission from a hundred papers and editorials and discussions of the most important element of the entire matter. There are, it is true, many other factors; there is really overstudy and overpressure, but the one cause of the nervous child which is ignored, but which is as prolific a source of evil as perhaps all others combined, is eyestrain.—*American Medicine.*

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| Codeine Phosphate | 1-8 gr. |
| Prunus Virginiana | 4 grs. |
| Pinus Strobus | 4 grs. |
| Sanguinaria Canadensis | ½ gr. |
| Populus Balsamifera | ½ gr. |
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To each fluid drachm.

**USES.—Recent and Chronic Coughs, Acute and Chronic Bronchitis and allied affections of the respiratory tract**

**Dose.**—One to two teaspoonfuls, as necessary, three or four times a day. Children according to age.

An admirable preparation that stops coughing, allays irritation and assists expectoration. It **does not nauseate** or **constipate**, and can be given with perfect **safety to a patient of any age.**

It is not put up in small packages for retailing, but dispensed from bulk on **physicians' prescriptions** only.

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**Births after Symphysiotomy.**

Dr. Otto Ihl (*Münchener medizinische Wochenschrift*) reports three cases of parturition which he observed some years after a previous symphysiotomy had been performed. In all the cases, the births were spontaneous and unusually easy. A loosened pubic joint could be demonstrated in each patient, and the author believes that the failure of the symphysis to reunite by bony union was of advantage to both mother and child. The author considers the methods of union after the performance of a symphysiotomy and concludes, in opposition to the views of Varnier and Pinard, that the usual result of the operation is a permanent widening of the pelvis with a failure of bony union. The operation is therefore one which offers a good prognosis in subsequent confinements for mother and child, and in many cases greatly facilitates the entrance of the head into the pelvis.—*N. Y. Med. Jour.*

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**The Drawbacks of Paraffin Injections for Cosmetic Purposes.**

The restoration of harmonious facial outlines by means of the subcutaneous injection of paraffin, now so much in vogue, is by no means free from drawbacks. If the right kind of paraffin be not employed, the resulting infiltration may be so plastic as to vary its shape when subjected to outside pressure. If the nose be the organ, the outline of which has been "corrected," it is apt to assume a different character every time the pocket handkerchief is used, a disconcerting variation being introduced into features which are reasonably expected to be permanent. If the injection be made with too hard, and therefore too hot, a paraffin, the vitality of the tissues may be damaged to the extent of causing sloughing. Under the most favorable circumstances the violent separation of the integument from the subjacent tissues may lead to a similar catastrophe by interfering with the blood supply. Although the paraffin usually excites no inflammatory reaction, this freedom from complications is not invariably observed, for a number of cases are on record in which troublesome inflammation has resulted. Another disconcerting accident is the diffusion of the paraffin to adjacent parts, as, for instance, in the case of a patient of Dr. Lejar's, of Paris, in whom the injection was followed three months later by tumefaction of the nose and eyelids, due to the transference of particles of paraffin, which had to be removed by incision. The presence of the paraffin, moreover, is apt to set up a process of fibrosis in the neighboring tissues, giving a shrivelled or wrinkled appearance to the skin, which more than overbalances the previous improvement.—*Medical Press and Circular.*

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, JULY, 1903. NO. 7

## Original Communications.

### PRESIDENTIAL ADDRESS, ONTARIO MEDICAL ASSOCIATION, 23RD ANNUAL MEETING.

BY J. C. MITCHELL, M.D.,
Physician to Asylum for the Insane, Toronto.

Gentlemen of the Ontario Medical Association: To have been deemed worthy of the most exalted position within the province of this Society to grant is indeed an honor.

The opportunity, however, to prove whether or not such virtue lies within me demands warmer expression of thanks, more zealous and untiring service from its recipient in order that the unblemished name and history of this Association may still stand for all that is worthy and of good report in our work. For both the kindly thought and the opportunity then, I desire to again express my thanks to the Medical Association of Ontario.

Permit me also to gratefully express my keen appreciation of the wisdom displayed in the selection of the executive. Surely no general ever had more faithful, earnest officers than were elected to support the hands of your President this year. To them, if there be success attending this meeting, let there be ascribed whatever of honor is associated in your minds with the successful carrying out of the general idea and the details of this meeting; theirs has been the tilling and sowing, with the labor late and early, that to you may come the full measure of reward for your faithfulness to this old Society which has meant much to many of us during the past years.

And now once again the President and officers greet the members and friends of this Association and desire to make their greeting warmer and more full of friendship than ever before, for has not our sympathy been mellowing and ripening



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during another year, short though it may seem. And not alone the old members do we greet with gladness but the new, and those who come to us as welcome guests.

I utterly fail to grasp the true sentiment of the profession here if your visit at this time does not make you feel how glad we are to have you as our guests, and how anxious we are that this brief period of relaxation from your onerous professional duties may be one of the most pleasant and profitable you have ever spent.

This Province, though young in years, has for the greater part of its life taken a prominent place in educational matters.

Our Public School system growing out of that established by that wise educationalist, Dr. Egerton Ryerson, is one of which we are justly proud, and yet it has its faults.

A few years ago Dr. Hutchison, of London, read a paper before the Association, pointing out the injury occasioned to our growing youth by the present system of determining promotion by the result of written examinations. He showed how a very large amount of the work done was simply cramming for examination and not true education. That a great many children and young people were severely injured in health from the unwise but unavoidable competition under the system.

At last freedom and better order are making their appearance. The Hon. R. Harcourt, Minister of Education, has brought in a bill this session making changes as far as city schools are concerned, and he proposes discussing more radical changes with a committee appointed at the Ontario Teachers' Association, so as to enlarge its scope next year to apply to all the schools of the Province, thus making our systems more educative and less competitive, by combining with it manual training and eliminating many of the examinations. Our pupils will not then be under so great a mental strain, and will have better opportunities to mature and make the healthy men and women this country requires for the great future it has before it.

Truly we can get along with fewer neurasthenics, neurotics and cranks than we have at present. We welcome the evidence of progressive thought and interest in the welfare of our youth on the part of the Government.

We congratulate the medical schools of the Province on the good work they are doing. Our graduates compare most favorably with those of similar length of training wherever they may hail from; men going from our schools having that within "which maketh not ashamed," notwithstanding the immense endowments of many of the wealthy colleges elsewhere on the continent.

The rapid changes and development in both medicine and surgery will soon require a longer and more extensive course

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than at present, and we can confidently depend upon the Ontario Medical Council keeping up the standard required to meet the exigencies of the time.

We can also trust the efficient staff of each of our medical colleges to make the clinical teaching keep pace with the large amount of work now required in the laboratory, so that our graduates may be as skilled in their observation of symptoms as they are in chemical and microscopic analysis.

We are glad to note the ever increasing number of our practitioners who are spending a greater or lesser amount of time in post-graduate work.

Has not the time arrived for the establishment of a post-graduate course in Toronto?

We have physicians as well instructed in scientific medicine, and surgeons who operate as skilfully as can be found anywhere. Our hospitals, too, have increased in number and importance, so that plenty of material could be at hand.

A staff formed by the union of our best men to give a post-graduate course could not fail to be of benefit to the Province, and afford opportunities of advanced study to many who could not, and to many who should not be allowed to go elsewhere.

We are glad to notice the increased number of hospitals throughout Ontario. It means a great deal to the afflicted, and particularly to those of limited means. It will give our local surgeons and practitioners a chance to do better work and to obtain vastly better results from the improved *regimé* possible in a more general use of the hospital. We trust it will not be many years until every town in Ontario will have its hospital.

We congratulate Lady Minto on her success in the establishment of Cottage Hospitals, and feel sure she will be rewarded for her labors in this direction by the benefit obtained by those afflicted ones who will receive care and treatment therein.

In our city hospitals I would endorse what our immediate past president, Dr. Powell, proposed last year, that the term of the house surgeon should be extended to at least eighteen months and so arranged that only half the staff be relieved at one time, so that skilled and expert men may be always in attendance. In this way a new appointee would not occupy a responsible position until trained for it and a skilled anesthetist would always be available.

In Provincial legislation the only matter of special note is the regulation adopted by the Provincial Board of Health on February 12th last *re* scarlet fever. It has occasioned a great deal of adverse criticism and it is questionable if the order for removal to either isolation hospital or tent is practicable at all seasons of the year either in congested communities or rural districts, and unless the attending physician has some voice in the matter it is not likely this law will be productive of good.

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As for the Dominion House, Dr. Roddick succeeded in getting an Act passed providing for the establishment of a Dominion Medical Council with full power to hold examinations in medicine and grant licenses valid in any portion of the Dominion. This Council can only become constituted when all the provinces have accepted the provisions of the Act. With the exception of Quebec all have enacted such legislation as to make the Act effective. The legislature of the Province of Quebec, however, defeated the bill introduced for the purpose of rendering the bill inoperative. The reason for this action was that under the present Provincial Act Quebec graduates in McGill, Bishops and Laval Universities who have passed four years in their studies and obtained their degree are entitled, without further examination, to obtain a license to practice medicine in that Province. Graduates of the Manitoba University also require but four years, whereas, in Ontario, as we all know, a fifth year has to be spent before the candidate can go up for his final examination before the Council.

Dr. Roddick's Bill, had it been accepted, would have placed students in all the provinces upon the same footing, and having passed the examination of the Dominion Council the successful candidate would then have possessed a license entitling him to practise anywhere in Canada.

The series of amendments to the Act suggested to render it acceptable to Quebec would be so manifestly unfair to Ontario that we, of this Province, could never accept them. It would appear, therefore, that inter-provincial legislation is dead for the time being, unless Quebec is willing to rescind its action of the past session, and, like Manitoba, unselfishly place itself on the equal and advanced footing of the other provinces.

Dr. Roddick, however, has still hopes, and writes to say that, "Considering that four of the provinces have completed the concurrent legislation necessary, I am not disposed to give up the fight."

He is now asking the Parliament to amend the Dominion Registration Act so as to permit the provinces that favor it to begin at once the work of such registration.

The doctor certainly deserves great credit for the vigorous fight he has put up, and we earnestly hope he may be successful in his efforts.

The need and importance of the continuous education of the public on the lines of public health and prophylaxis is well illustrated by the formation of an anti-vaccination society in this city. At some of the meetings of this society this year, some practising physicians made statements (or were reported to have made them according to daily papers, April 10th) so wide of the truth that they showed a most lamentable ignorance of the whole history of the subject.

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When we find the very commendable action for the enforcement of vaccination questioned by one of our own profession who introduced a motion during the late session of the legislature for the repeal of said enactment, it is certainly time to look into the matter and ventilate it as thoroughly as possible.

We believe with Dr. Ridpath that: "Essential freedom is the right to differ, and that right must be sacredly respected, nor must the privilege of dissent be conceded with coldness or disdain, but openly, cordially, and with good will. No loss of rank, abatement of character or ostracism from society must darken the pathway of the humblest, honest seeker after truth. The right of free thought, free enquiry, and free speech to all everywhere, is as clear as the noonday, and bounteous as the air and the sea."

If all professed seekers after truth were only honest in their views we could have no quarrel with them, even though we might differ in the result of our investigations. Some talk loudly on these subjects simply for effect, and are not honest in their statements, but desirous to achieve notoriety. Others talk through ignorance, having never taken either the time or labor to obtain for themselves the facts of the case. Then, added to these classes, we have the cranks and bores who will have a word in anyway, even if it be to repeat again and again some set speech.

At the same time it is the duty of the medical profession to continue to do as they have done in the past: ascertain all the facts in the case, study out the underlying truths, and put them, so far as we can, in the possession of the public. We must, so far as in us lies, continue to protect the public from themselves, even though we may often be called hard names, and lie under the charge that we are working with interested motives. On the contrary, we have motives of the very highest and noblest character, viz., the best interests of humanity; the desire to have justice done to the poorest and humblest who have not the means of protecting themselves from the scourges, such as smallpox, etc., that may devastate and destroy countless numbers, as in the past. Smallpox, from being a dreaded scourge, has become a disease seldom seen, and its increased prevalence during the past few years may well be ascribed to our increasing carelessness in vaccination.

Unless we are occasionally wakened up by an epidemic the tendency to neglect all forms of safeguarding ourselves grows upon us, and we do not like to take the trouble to render ourselves safe. It is difficult to convince people who have never seen the ravages of smallpox that it is an essential thing that their children should be vaccinated (and run the chances of a few days' illness or a very sore arm) for the sake of being pre-

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pared for an evil that is unknown to them, and therefore entirely unappreciated.

There certainly have been evils in connection with vaccination, but what are the very worst of those compared to an epidemic of true smallpox in an unvaccinated neighborhood.

It would be safe to pay no attention to these anti-vaccinationists and class them in with the followers of Christian Science, the Dowieites, Vitosophists, Osteopathists, etc., were they not such a menace by reason of their position as guardians of the public health. We see very many apparently sensible people led off by these fads, so it becomes our duty to impart to them all the knowledge we can on these important questions of health and disease, and particularly along the line of preventative medicine.

Germany has possibly the most compulsory system of vaccination in the world known, and the result is that smallpox has almost vanished from the Empire. In 1899, with a population of 54,000,000, there were only 28 deaths of people nearly all of whom came in from an adjoining country.

If we consider the duty of the true physician is to stand by all measures that tend to promote health and prevent disease, there should be some way then of punishing those doctors who encourage the laity in their foolishness in combatting the laws which are intended for their own best interests. Such action is certainly highly reprehensible, and it is hard to believe physicians of any school could be guilty of talking such "utter nonsense" as was attributed to them at one of their anti-vaccination meetings.

It is quite probable that Dr. Councilman's great discovery of the germ that causes smallpox will assist us in a short time to a better understanding of the *rationalé* of vaccination.

Two years ago the then president, Dr. McKinnon, referred to the great and serious delay there was in gaining admission to our asylums for cases of acute mania, particularly with those at a distance.

This need never occur at the present time with our long distance telephone facilities, if our physicans are only careful enough to supply sufficient information. In all our asylums the superintendents are anxious to take in and look after this class of cases, and if applying physicians will but send full particulars setting forth the urgency of the case, complete papers for admission will be sent at once.

Asylum authorities, as a rule, send the history or application paper to fill up first, and then, if the case is a suitable one, and they can at all make room the patient is admitted.

A great many senile cases are sent into asylums which could be looked after all right in their own home.

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It is a matter of great regret that so many insane people are sent to gaol without first making application to our asylums to see if they cannot be admitted at once. In the past year of all the insane that have been sent into Toronto gaol (and there have been a large number), in only four cases was Toronto asylum asked to admit the patient previous to arrest, and in all of these cases (with one exception due to overcrowding), although we sent the complete set of papers immediately on application, an arrest was made before the papers reached them, when there was really no necessity for this precipitancy.

Our physicians have a large measure of responsibility in this matter and they should try and prevent any case of insanity being sent to the gaol, unless there is absolutely no room for them in asylums, as is sometimes the case.

A change also should be made in the law so that two medical certificates would transfer a patient from the gaol to the asylum as it does from outside. In this way prompt action could be taken as against the complex procedure which at present exists.

We are glad to note that the Provincial Secretary, Hon. J. R. Stratton, has introduced and passed an act the past session, making it compulsory for all counties to erect and help sustain County Refuge Homes, one in each county or united counties. If these homes were in every county our asylums could in time be unloaded of all the chronic harmless dements and leave space for those amenable to treatment or who are a menace to the public or themselves.

So much can be accomplished by proper treatment and so many apparently hopeless patients restored to normal or almost normal conditions that it is certainly very sad that all the deranged cannot obtain a fair chance of recovery. We are overcrowded by a class of patients that would be quite safe elsewhere.

If county homes would take harmless dements and the majority of the senile cases it would leave room for the immediate admission of all acute cases and give opportunity for the classification and arranging of those under treatment. It would also, if properly looked after, lessen the arrests for insanity and shorten the period of their confinement in gaol when arrested.

It would be well to see the name asylum done away with and the term hospital substituted. An asylum simply means a place of refuge, while the term hospital would educate the public to understand that it is an institution for cure.

The medical profession should educate the public as to the dire results of heredity by misalliance, which populate the country with degenerates, a large number of whom afterwards gravitate to the asylums. They also have a very wide field in

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the way of preventative treatment of children with a tainted line or lines of ancestry. Much more can be done than is commonly thought to ward off impending evils by early attention to the mental and physical evolution of such children.

The officers and active friends of the Ontario Medical Library Association have made strenuous efforts the past few months to place the library on a more sound financial basis.

There has been a movement on foot to enable the Board to purchase or erect a suitable building in which to store the books, and in which the several medical societies in the city can hold their regular meetings. At the last annual meeting, held on June 10th, handsome subscriptions for this purpose were reported by the Trust Committee, including $1,000 from Prof. William Osler. The amount subscribed by the profession is upwards of $3,600. In addition, between five and six thousand dollars have already been promised by a few public-spirited gentlemen who have the interests of the library at heart. The members of the profession have not as yet been all canvassed. The Board feel very much encouraged in their efforts and hope soon to be able to report further progress, and that the long-felt want will soon be a reality.

Now that the amalgamation of the Universities of Trinity and Toronto seems to be assured, there is greater unanimity than ever among the friends of the library. The feeling is that we should have a large central building which could be used for meetings such as this, in fact, a place where each medical man in the city and Province could feel he had a home. For the present they still occupy rooms in the upper floor of the Medical Council building, which have been provided for them by that body for a number of years. The Board wish to convey their thanks to the members of the Ontario Medical Council and Ontario Medical Association and the numerous private individuals who have generously contributed to the support of the library.

The books on the shelves are now catalogued and members of the Association are requested to take a copy of the catalogue with them, and if they wish to have a book sent them, that can be done simply by mailing a card to the Assistant Librarian and paying express charges.

It will be noted that in order to make the library self-sustaining as far as possible, the annual fee of $2 has been raised to $5.

At Gravenhurst, the National Sanitarium Association are continuing the excellent work for consumptive patients of our Province and of the Dominion.

A free hospital has been provided at a cost of $40,000 for the treatment of those who are really unable to care for themselves

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as well as for those who are able to pay but a portion of the expense for their care.

No patient has been turned away, providing he was medically considered fit to undergo the treatment there. So that all cases of incipient phthisis, the poorest as well as the richest, have thus a door opened to them which has in many cases proved a door of salvation.

An effort is being made to induce the Government to make a grant of $20,000 towards the latter institution and we cannot conceive of a more legitimate demand on the part of the people for an apportionment of the people's money than one to this cause. It is greatly to be desired that both the public and the profession examine more thoroughly the work carried on so that all may be more thoroughly the work carried on so that all may be more interested in what has proved to be one of the most worthy institutions of our Province.

One of the greatest bars to the successful prosecution of the work from the professional aspect is the failure on the part of the profession to secure an early diagnosis of the condition of a patient.

How long will it be necessary for this Association to call attention to this fact? Happily our minds are slowly awakening to it, though our rising is but slow. The fault is not entirely with ourselves but also largely belongs to the careless public.

As for ourselves let there be no longer any taint upon our skirts—no partial and unsatisfactory examination of patients —no longer let the ready cough mixture take the place of scientific treatment preceded by systematic and minute analysis of symptoms. To-day with the enlightenment abroad in the world it is for every practitioner to enjoy the privileges made possible by the indefatigable workers along these lines.

One of the greatest advantages that results to the patients undergoing treatment at Gravenhurst is the knowledge he acquires as to how to live, so that he may prolong his own life and care for as well as teach others how to live.

Although the religious periodicals of Ontario have greatly improved in their character in the medical advertisements published during the past few years, they might go still further and copy the example set this year by one denomination in the United States. The agent having charge of all the advertising in the Methodist periodicals for the whole of the United States has definitely announced that no medical advertisement of any kind will be accepted this year.

Many of these advertisements are not only very immodest, but have an extremely debasing and immoral tendency, and many things are advertised to be used for immoral purposes,

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but worded in such a way as to keep the advertiser safe from the law, as they admit of a double meaning.

Our public press still pander to this kind of thing, and many of the advertisements in our daily papers are simply disgraceful and not decent enough to be introduced into a respectable home.

Apart from this, they are all intended to gull the public.

Take for example, the wonderful cures by "The great Dr. Bluff," of Boston, the Electric Belts, Peruvian Syrup, and scores of other fakes of that class.

People who have led immoral lives, chronic sufferers and the weak-minded generally, are led away by the wonderful results promised in this misleading twaddle. They think there can be some miraculous change performed by these quack remedies, and that they will be restored to health and still go ahead and violate nature's laws in any and every particular.

It is time that our leading journals freed themselves from this prostitution and published clear sheets that have for their object the building up and amelioration of man's condition.

Our medical men themselves, we are sorry to admit, are not always free from dabbling with quack remedies, and it is not to be wondered at when some of the medical journals to the south of us advertise medicines which border on quackery as freely as they do. If we want to retain our own self-respect, and the respect of our professional brethren, we must stand by legitimate medicine. "Prove all things, hold fast that which is good."

We cannot bring our paper to a close without referring to some of the events which have occurred during the year, bringing sadness to all our minds.

The rider of the Pale Horse has been busy counting up his roll of victims. We see emblazoned upon the marble shields of his hosts an ever increasing number of names of good soldiers that have been overcome while battling "strong and true."

We, who are thrown into the posts of danger and the vanguard of the forces, must yield our quota of losses—for the inexorable law promulgated in the beginning of time may not be set aside. Though our warfare must always end in defeat until that great day when a new heaven and a new earth appear, and the weapons of our warfare are laid aside, yet we battle on, proud in our strife, because of the glorious possibilities which lie before all seekers after truth. Every true physician desires but to say at last, "I have fought a good fight, I have finished my course," for though the sword of the King of Terror strike us from our places, yet does it but cut the latch which lightly closes the gateway to the Eternal.

Ontario, this year, has a long roll of names of those who

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have gone up from the battle. Of these, perhaps, the most familiar to us all are those of Spencer, Gordon and Horsey. The first two, because of their long connection with the two medical colleges, in which they did faithful work, and also because of the active interest they took in this association. The latter, because of the important position he filled, and seemed destined to enlarge in the political life of the Dominion.

The kindly reference to the life and work of Gilbert Gordon in the daily press, with its general estimation of the value of the cultured, honorable and sympathetic practitioner to the community, commands our warm praise, and makes us feel that the ofttimes overtaxing strain is, after all, worth the labor, if it but brings us so near to the hearts of our fellowmen.

Abroad, one of the Princes of Medicine passed away in the person of the great Virchow, honored by his fellows the world over, by the state and people.

While the veil of the future still hangs before our eyes, and though we stand on this side in what seems to be the full glory of the noontide of discovery, yet ever and anon there flash out from its impenetrableness gleams of light that seem to us revelations more glorious and full of hope than any which have yet been accorded to this age of rapid advancement.

We rejoice in the history of the past, with its record from the groping of inexperience to the dawn of rationalism.

The progress in our science has carried us from the question, "How shall we treat?" to "How shall we prevent?" and the unfolding of the future will largely concern developments along the line of the latter question.

To its solution this chair again calls your eager attention and effort. No question involving greater issues has ever been presented to the minds of men.

The time demands greater concentration of effort, more systematic methods of study and work, a priesthood in the temple of Galen more intellectual and highly trained than has been found during the past, and these the time will have. Let it be our part to so lay the new road-beds of medical progress that the trains may run no danger of being jolted and hindered by the pine stumps and rocks of the "has been."

"Then let us on through shower and sun,
And heat and cold be driving;
There's life alone in duty done,
And rest alone in striving."—*Whittier.*

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# UTERINE MYOMATA AND THEIR TREATMENT.*

By THOMAS S. CULLEN, M.B.,
Associate Professor of Gynecology in the Johns Hopkins University.

*Mr. President and Gentlemen:*

I gladly accepted your very kind invitation, not only on account of the great honor you have conferred upon me, but also because it gives me the pleasure of once more mingling with my teachers and schoolmates. It carries me back to my earliest glimpses of medicine, and even now I have vague recollections of sitting on the anxious bench nervously awaiting the results of the University and Council examination.

The subject I have chosen is a familiar one everywhere, but strikingly so in the South, where the negro population is greater. In Baltimore, nearly one-tenth of all gynecological cases admitted to our wards have been uterine myomata. Dr. Kelly and I have been analyzing the material of the Johns Hopkins Hospital of the last fourteen years, and during that time considerably more than a thousand cases of myoma have been placed on record. In deciding upon the preferable operative procedure in a given case, it is necessary to bear in mind the different varieties of myomata, their situation and size, the various degenerative processes which they may undergo and the complications that may arise. Furthermore, certain symptoms will also serve as a guide for treatment. In order to make the present paper clearer, permit me to discuss briefly these points. The subject is not new, but we are every day adding little by little to our knowledge of it.

From the investigations of others as well as from our own studies, it would appear probable that in the beginning nearly all myomata are interstitial. As they increase in size they may remain so, or on the other hand, may push outward or inward, forming subperitoneal or submucous nodules. The number of myomata present in a uterus may vary greatly. Occasionally only one is present, but more frequently seven or eight, and in not a few instances twenty or more can be counted. Again, these growths usually vary much in size. Thus in a uterus there will often be found a myoma of many pounds' weight, while in its immediate vicinity is another myomatous nodule not larger than a pin-head. As we all know, myomata may occupy any part of the uterus, sometimes being located on the surface of the organ, or at other times pushing their way out between the folds of the broad ligament. Again, not infrequently they occupy the entire pelvis, and we find the body of the uterus lying on the top of them. These are the cervical myomata which at times are so difficult of removal.

* Read at a meeting of the Ontario Medical Association, June 17th. 1903.

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## Condition of the Endometrium where Simple Uterine Myomata Exist.

As a rule the cervical mucosa is perfectly normal save for the presence of a cervical polyp, or some dilated cervical glands. In the body of the uterus, endometritis is occasionally found, but, when present, is almost invariably associated with inflammatory changes in the adnexa. Tuberculosis of the endometrium is occasionally associated with myomata, but rarely occurs independently, and is then usually secondary to a similar process in the Fallopian tubes. Of squamous-cell carcinoma of the cervix and adeno-carcinoma of the body of the uterus we shall speak later.

While any of the foregoing conditions may exist, in nearly all instances the changes present are usually entirely mechanical in their nature. If the myomata are subperitoneal or intraligamentary, the mucosa is usually normal, provided, of course, that the tubes are unaltered. When the nodule impinges on the uterine cavity the mucosa over the most prominent part becomes stretched and thinned out, until eventually there will remain nothing but the surface epithelium covering the nodule. While this atrophy is taking place, the mucosa in the depressions at the sides of the nodules remains unaltered or becomes thicker, this thickening occasionally being due to simple gland hypertrophy. Portions of the mucosa are often mechanically forced out into the cavity, producing polypi. With the distortion of the mucosa the glands sometimes become blocked, and small cystic dilatations are formed.

When the myoma becomes entirely submucous, it is usually covered by a thin layer of mucosa, but in a few instances we have seen a sloughing focus in the myoma opening directly into the uterine cavity.

Now and then a submucous myoma in the posterior wall will blend with a similar nodule in the anterior wall, obliterating the uterine cavity entirely over a limited area. From an examination of a great many specimens we can lay down the general rule that where the Fallopian tubes are normal, and where no sloughing submucous myoma exists the uterine mucosa is perfectly normal. This fact has no little bearing on the operative treatment inasmuch as the condition of the mucosa is an index of how far we may venture in removing a partially submucous myoma by way of the abdomen. Histological studies, then, having taught us that the endometrium is usually normal, we can in most instances open up the uterine cavity with little or no danger of infection.

*Parasitic Myomata.*—With the increase in their size the

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subperitoneal nodules are continually rubbing against neighboring structures and frequently become attached to them. As a rule they become adherent to the omentum, the omental vessels soon furnishing a part of the blood supply and the original attachment to the uterus becoming less and less, until it is finally lost and the nodule apparently springs from the omentum and from it receives its entire nourishment.

Recently I operated upon a patient giving a clinical history almost typical of an ovarian cyst, but on opening the abdomen I found a myoma about the size of a fetal head. This was attached to the uterus by a very delicate pedicle, while all the omental vessel plunged into its upper portion and supplied nearly all its nourishment. Associated with this partially parasitic myoma was an accumulation of fifty-two litres of ascitic fluid.

A few months ago, while performing a hystero-myomectomy, I saw a nodule as large as a baseball situated at the brim of the pelvis. It lay directly over the ureter as the latter crossed the pelvic brim. Its nourishment came from the mesenteric vessels, and it had absolutely no connection with the uterus. This nodule in all probability had originated in the uterus, but becoming adherent to the pelvic brim had gradually changed its source of nourishment until all trace of its former attachment was lost.

*Simple Degeneration in Myomata.*—Myomata, no matter where situated, often undergo softening. In the first place the tissue changes in color from the characteristic whitish-pink to a white or yellowish-white. Such areas are sharply circumscribed and occupy a varying portion of the myoma. This whitish tissue gradually disintegrates, and the spaces thus resulting are usually filled with a clear serous fluid. Sometimes, however, the material is oily in nature, resembling melted butter. As a result of the continual breaking-down of this altered tissue we have large cavities traversed by delicate trabeculæ. On histological examination the degeneration is seen to be hyaline in character, and this hyaline tissue gradually melts or fades away, leaving the spaces filled usually with serum, but occasionally with the butterlike material. This fluid on histological examination is found to contain large quantities of fat droplets and cholester in crystals. In these degenerated myomata there is usually not the slightest inflammatory reaction and no evidence of infection. This is fortunate since, if perchance we should accidentally rupture such myoma during its removal, we should have little to fear if some of its contents escaped into the abdomen cavity.

*Suppurating Myomata.*—Occasionally subperitoneal and intra-ligamentary myomata become infected, probably as the

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result of some degeneration which has permitted the entrance of bacteria. These suppurating myomata have an outer covering of myomatous tissue and are lined internally by granulation tissue. We have seen them containing several litres of pus. In one patient operated upon at the Johns Hopkins Hospital there was a large cavity in a subperitoneal myoma which extended as high as the umbilicus. This cavity communicated freely with the transverse colon, the feces passing directly from the gut into the abscess cavity.

*Sloughing Submucous Myomata.*—While the subperitoneal nodules are extending upward and outward the submucous ones are forced more and more into the uterine cavity. Their mucosa becomes thinner and thinner and eventually the dependent portion of the nodule usually undergoes necrosis and sloughing. Sometimes only a small portion of the nodule disintegrates, but occasionally the uterine cavity contains a sloughing nodule fully as large as an adult head.

In one of our cases we found a necrotic interstitial myoma which on its inner side communicated with the uterine cavity. On its outer side it had involved the uterine wall; necrosis had followed, the peritoneum had become involved and the patient had died of a general purulent peritonitis.

*The Tubes and Ovaries in Cases of Myoma.*—Let us now briefly consider the condition of the tubes and ovaries and also see the effect of the myomatous uterus on the surrounding structures. In the tubes we have noted hydrosalpinx (simple and follicular), hemosalpinx, tubal pregnancy, salpingitis, tubo-ovarian cysts and adeno-carcinoma, secondary to adeno-carcinoma of the ovary. Occasionally the normal tubes may be lost on the surface of the myoma and appear again at a distant point. While any of these conditions may be found, simple inflammatory adhesions are the most frequent. In all probability the adherent condition of the tube is due to the mechanical irritation caused by its being rotated and rubbed against surrounding parts.

Numerous pathological conditions of the ovary are also associated with uterine myomata. Thus we have found Graafian follicle cysts, both large and small, corpus luteum cysts, multilocular adenocystomata, dermoids, papillo-cystomata, primary adeno-carcinomata and ovarian abscesses. The ovaries are often embedded in adhesions, usually delicate and fan-like. The inflammatory reaction seems to be chiefly the result of mechanical irritation.

Parovarian cysts are also associated with myomata in a moderate number of cases.

The relation of the *bladder* to the myomatous uterus is also of importance from an operative standpoint. At times it is

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not at all altered in its position, but is often drawn upward and outward, being spread uniformly over the anterior surface of the tumor. In other instances it has early become adherent to the tumor at one point and with the growth of the myoma has been drawn out into a long tongue or funnel-shaped projection. We have seen the bladder drawn fifteen or more centimetres above its normal attachment and in a few instances it has extended upward as far as the umbilicus. The interior of the bladder is rarely, if ever, altered.

If the tumor become incarcerated in the pelvis and pressure symptoms develop the *ureters* are frequently affected. First they dilate, giving rise to a hydro-ureter, sometimes reaching 1.3 cm. or more in diameter. Later on they may become adherent to the myoma and with its continued growth be carried up out of the pelvis. It is exceedingly important to remember this possible displacement when operating. Hypertrophy of the ureter is occasionally caused by the myoma and hydronephrosis may supervene.

Adhesions between the myomatous organ and the rectum frequently take place, especially where the growth tends to become incarcerated in the pelvis. As the growth rises up, it sometimes takes the rectum with it, making it taut and carrying the upper portion high into the abdomen. As might naturally be expected, the intestines which lie in direct contact with the tumor sometimes become adherent to it. As a rule these adhesions are slight, but at these times the intestine is so intimately blended with the growth that it is necessary to sacrifice a portion of the uterine wall in removing the organ. Occasionally kinks in the bowel follow as a result of adhesions and the patient dies of intestinal obstruction. The appendix in many cases has dropped down and become adherent to the tumor or to the right tube and ovary.

*Adeno-myomata of the Uterus.*—We will now consider a variety of myoma which until very recently has received little attention. In these cases we have, as a rule, a uterus which is moderately enlarged, but which conforms to the normal contour save for some small nodules scattered throughout its walls or over its surface. On microscopic examination we find that the inner muscular layers of the uterine walls have become coarse in texture and converted into myomatous tissue. Into this coarse-textured tissue the uterine mucosa literally flows. We thus have myomatous tissue with islands and rivers of normal uterine mucosa scattered throughout it. With the gradual growth of the adeno-myoma portions of the mucosa are nipped off and either become submucous adeno-myomata or pass to the outer surface, forming subperitoneal nodules. The islands of mucosa in the myomata still retain their natural menstrual

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function and hence at each period pour out their quota of menstrual blood. Naturally where the nodule is subperitoneal and the glands are surrounded on all sides by myomatous muscle there is no escape for this flow. It thus accumulates and eventually we have the myomata containing large cyst-like spaces lined by a smooth, velvety mucosa and filled with chocolate-colored fluid—the damned-up, changed menstrual flow. In nearly every instance in which we find a large intra-ligamentary or subperitoneal myoma containing such cyst-like spaces and filled with chocolate-colored contents we may ascribe it to an old adeno-myoma. Adeno-myomata of the uterus were found in nearly 2 per cent. of our cases. They are benign.

*Sarcomatous Degeneration of Myomata.*—Within recent years studies have definitely established the fact that myomata may undergo sarcomatous degeneration. Clinically, patients suffering from such growths usually give a history of several years' duration, during which the growth has either lain dormant or increased very slowly. Suddenly there is renewed activity, and in a few months the myoma increases greatly in size, and more or less marked signs of cachexia begin to appear. Sarcoma usually develops in one of several myomatous nodules and may be subperitoneal, interstitial or submucous, although it was formerly thought that such growths were always of the last-named variety. If the sarcoma develops in a submucous myoma portions of it may from time to time be expelled through the vagina—the so-called "recurrent fibroids." The sarcoma may develop from one of two sources, the connective tissue or the myomatous muscle cells. If it originates from the stroma the sarcoma may be spindle-celled or round-celled; if from the muscle, it is of the spindle-celled variety. From the drawings which are being passed anyone will be able to convince himself that a sarcoma may develop in the centres of myomata, and from the histological pictures it is possible to trace all stages from the normal muscle fibres to those which show the typical ear-marks of sarcoma. We have had several such cases in our series where the myomata became sarcomatous and in some of them death soon followed from metastases. It is of extreme importance to remember these cases when weighing in our minds the appropriate mode of treatment.

*Carcinoma of the Uterus Associated with Myoma.*—In my work on Cancer I reported several cases of carcinoma of the uterus occurring in conjunction with myomata, and in the three years intervening since the appearance of the book a goodly number of similar cases have come under my observation. Of course, where squamous-celled carcinoma or adeno-carcinoma of the cervix exists it will as a rule be readily detected before the



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operation, and we will thereby be influenced in our mode of treatment. In the majority of the cases, however, where cancer of the body of the uterus has existed, it has not been suspected until the uterus had been opened after operation. Nor need such ignorance be unpardonable; for in all probability the only suggestive symptom has been hemorrhage, which naturally would be explained as belonging to the myoma. One would hardly deem it necessary or wise to curette when the myoma could be so clearly outlined, and considering the fact that the uterus is to be removed in so short a time. Nevertheless, when outlining the treatment one should always bear in mind the possible co-existence of a carcinoma of the body of the uterus and act accordingly.

*Symptoms of Myomata.*—The clinical features in cases of uterine myomata are mainly dependent on two chief factors. First: The situation of the nodules. Secondly: The size of the tumor. While these growths develop during the child-bearing period, they may not make themselves manifest until late in life. A myoma may be as large as a fetal head and yet give no symptoms whatever and be only accidentally detected. On the other hand, a nodule not larger than a walnut may give rise to alarming hemorrhages. If the myomata are interstitial or subperitoneal and so situated that they do not encroach on the uterine cavity, there will, as a rule, be little bleeding. On the other hand, if the myoma projects into the uterine cavity, thereby putting the mucosa on tension, there will undoubtedly be very free and troublesome hemorrhage. The amount of bleeding is usually in direct proportion to the surface area of the uterine mucosa on tension. We have had patients lose nearly two litres of blood at one time, and in one case I was called in to see the uterine cavity was 24 cm. in length and contained over a litre of decomposing blood-clots.

In the cases in which the myomata encroach on the uterine cavity the patient will usually give a history of prolonged menstrual periods for the last few years and will complain of some backache and often of a feeling of bearing-down pain in the lower abdomen. After suffering from these symptoms for a time she suddenly notices a lump in the lower part of the abdomen. With this increase in size there may be an increased frequency in micturition or retention due to the bladder being jammed up against the symphysis pubis. With the continued growth of the tumor constipation becomes marked and possibly pruritus ani develops, both due to the pressure of the growth on the rectum. Later on the woman suffers from pain and occasionally notices edema in one or both of the lower extremities. I recently operated upon a patient who had an interstitial myoma about the size of a child's head. The pressure symp-

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toms were such that when lying down she had to be assisted to rise, although, when once on her feet, she had no difficulty in attending to her household duties.

With the continued enlargement of the myoma the abdominal contents will be forced upward against the diaphragm and shortness of breath will naturally follow.

In those cases in which submucous myomata exist, as evidenced by the prolonged menstrual periods or menorrhagia, the hemorrhage usually increases in amount, and between the periods of bleeding there is a purulent or muco-purulent discharge. In some instances, the submucous myoma is forced more and more into the uterine cavity and after a time projects slightly through the external os. At this time, there is often a loss of substance over the most dependent portion of the tumor. Necrosis of the nodule now readily takes place and we have in addition to the hemorrhage a continual watery and most offensive vaginal discharge, in odour and appearance often strongly suggesting that common in cancer. The long drain on the patient's resources saps her strength and she becomes sallow or very anemic in appearance and may have irregular elevations of temperature due to the damming-up in the uterus of purulent fluid, or to a septic focus which has meanwhile developed in the Fallopian tubes or in a neighboring myomatous nodule. The hemoglobin at this stage is often below 30 per cent. There are hemic heart murmurs, and the patient suffers from giddiness and fainting spells. Under such conditions she is now forced to spend most of her time in bed. Such is frequently the clinical history in the severe cases of myoma. In addition to these symptoms, we must remember those occurring where intestinal obstruction or appendicitis supervene or where the development of ovarian cysts or extra-uterine pregnancy add to the complications.

*Vaginal Examination.*—While much may be learned from the clinical history nothing gives such a clear idea as the bimanual examination. In a simple case, the finger in the vagina finds the cervix to be of normal size, while with the abdominal hand one or more hard nodules are to be felt rising up out of the pelvis, and on making pressure upward from the vagina we are able to determine that the mass is directly continuous with the cervix. This also enables us to determine the mobility of the tumor and also sometimes permits us to say with a fair degree of certainty whether the growth is adherent or not. In not a few instances, we find the cervix jammed up against the symphysis pubis, and the posterior vaginal vault bulging downward, due to the choking of the pelvis by the tumor. If the growth be cervical, the cervix has often unfolded itself on the surface of the myoma and is flush with the vaginal vault. In

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such a case, the external os is often recognized as a semi-lunar slit two or three cm. in length.

Where a submucous myoma exists, the cervix will often admit the finger, and the nodule can be felt plugging the cervical canal just above the external os. If the myoma has already partially escaped into the vagina, the finger comes immediately in contact with it, and on skirting it backward the cervical lip is felt as a tense band hugging the outer surface of the growth.

Where the myoma is necrotic and has been sloughing for a long time we may find a tough but soft, slimy mass projecting from the vaginal outlet. Such tissue bears a striking resemblance to raw beef that has been macerated in water for some length of time.

Gentleness should always be exercised while making vaginal examinations. In at least two instances on opening the abdomen I have found that during the examination, just prior to the operation, subperitoneal nodules had been torn from their pedicles, and that from the rent there had been free hemorrhage into the pelvis. In both of these cases several persons had examined the patient and evidently too much force had been used. Where the operation was performed at once, as in these cases, the injury was of little consequence, but should such an accident have occurred during an ordinary routine examination, there would, in all probability, have been a fatal hemorrhage.

## Treatment of Uterine Myomata.

The surgeon's first duty is to remove the growth. The second, equally important, is to sacrifice the reproductive organs as little as possible consistent with safety. Prior to opening the abdomen a catheter should be introduced to determine the confines of the bladder. If the *viscus* is high up, the abdominal incision should be commenced near the umbilicus and carefully continued toward the pubes. After having entered the peritoneal cavity and carefully packed off the intestine, the operator should examine the tubes and ovaries, and if these are free from adhesions, the question of a simple myomectomy should be considered.

*Myomectomy.*—Should the tubes be the seat of an inflammation a hysterectomy should be performed, as there is a possibility of infecting the cavities left in the uterus after the removal of the myomata. Several years ago, over-enthusiastic for conservatism, I did a myomectomy, after having made artificial fimbriated extremities for both tubes. In a few days there were distinct evidences of infection of the uterus. I again opened the abdomen and drained from above and below. The patient lingered for a month and then died. In this case

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there was in all probability a latent infection lurking in the tubes, although no pus was detected at the time of the primary operation. The operation was a simple one, and had I performed a hysterectomy recovery would, in all probability, have followed.

After satisfying ourselves that the appendages are normal, and that there is no offensive vaginal discharge indicative of a submucous myoma or of carcinoma, we should carefully examine the uterus to see if it be feasible to do a myomectomy. Where the nodules are few in number and situated at accessible points, the uterus should be saved. In a few instances we have removed interstitial myomata larger than an adult head, and yet been able to preserve the uterus. If, however, the uterus is everywhere studded with small or medium-sized myomata, there is a great probability that some would be left behind and a subsequent hysterectomy become necessary.

It is not advisable to do a myomectomy where the nodule is situated in the broad ligament or deep down laterally in the pelvis. In these situations it is impossible to obliterate the resultant spaces, and blood is bound to accumulate. These difficulties might be overcome by abdominal drainage, but here hysterectomy is preferable. Several years ago I removed a nodule, the size of a small cocoanut, from the left broad ligament. The lower portion of this nodule extended far down beside the vagina. There was little hemorrhage, and the tissue apparently fell together nicely. In a few days, however, the temperature rose to 104. Shortly after this there was a free discharge of pus from the bladder, and on examination much induration of the left side of the vagina was found. The abscess had opened into the bladder. After several weeks the abscess cavity closed and the patient is now, six years after operation, in perfect health. A similar case was noted by a colleague of mine; in this instance, however, the bladder was not implicated.

Should we decide on myomectomy, the easiest method of controlling bleeding is by means of a gauze rope applied around the cervix and clamped with artery forceps, thus avoiding the necessity of tying. If the myoma be small, the incision is made directly over it and as soon as the nodule is exposed it is grasped with a meso-forceps and twisted or shelled out. Where the nodule is large and partially sub-peritoneal, a lozenge-shaped piece of muscle is usually excised with the tumor. Care should be taken not to sacrifice too much muscle, as so much contraction may occur that it will be found almost impossible to bring the margins of the cavity together. After careful palpating the uterine walls, to be sure that no other nodules remain and having turned in the mucosa and sutured with cat-gut, should

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the uterine cavity have been opened at any point, the various cavities are totally obliterated by cat-gut sutures, three or four rows being used if necessary. It is upon this total obliteration of all dead spaces that the success of the operation depends. Often there is bleeding from the stitch-holes on the surface. This is usually controlled by placing one or more cat-gut sutures at right angles to the others.

The operator need not be alarmed if the temperature rise to 100 or even to 102 or 103 a few days after the operation. This we have noted very frequently. In such cases dead spaces have undoubtedly been left behind and there soon occurs a disintegration and absorption of the blood.

One should always remember that myomectomy is a much more dangerous operation than hysterectomy, and if patient be weak or any other contra-indication exist the complete operation should be chosen. The latter operation is the one of choice after the menopause, myomectomy being applicable during the child-bearing period.

The operator should also bear in mind the possibility of leaving some myomata behind. I recently saw in the dispensary a patient on whom myomectomy had been performed nine years previously. She had been perfectly well for several years, but when admitted to the hospital a second time the uterus was fully five times the normal size and everywhere studded with myomata.

Where the resultant incision in the uterus is long and it is necessary to hold the organ up on account of its large size, intra-abdominal shortening of the round ligaments is preferable to suspension. I am familiar with a case in which, following a myomectomy, the uterine incision became intimately blended with the abdominal wall over a wide area. Pregnancy followed, Cæsarian section was performed and the patient died. Suspension in such a case is an entirely different problem to the simple operation for displacement, as in the latter there is no raw surface whatsoever.

I would strongly advise giving the preference to myomectomy in all suitable cases, but in every doubtful instance hysterectomy should be performed.

*Hystero-myomectomy with Preservation of the Ovaries.*—In those cases in which it is deemed safer to perform hysterectomy, if the patient has not passed the menopause, we should endeavor to save the ovaries. In the first place we have no right to remove normal structures, and in the second place preservation of the ovaries will relieve the patient to a great extent of the troublesome hot flushes and nervous phenomena naturally associated with the menopause. Thus, where the operation is performed on a woman, say thirty-five years of age, these

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unpleasant phenomena are generally deferred until the usual time for the cessation of menstrual life or for several years at least. We make it a point to preserve one or both ovaries wherever feasible. Spinelli and others are still more conservative, and whenever possible preserve at least the lower segment of the uterine cavity. In other words some of the mucosa from the body is left *in situ* and the menstrual function, although naturally limited, is still preserved. In the near future it seems probable that this plan of treatment will often be adopted.

In performing the ordinary hysterectomy with amputation through the cervix it is always well to remember the blood supply of the pelvic organs. From above downward we have the ovarian artery and veins easily exposed to the outer side of the ovary. Next comes the artery of the round ligament which, although small, often occasions much oozing, if not tied. On freeing the folds of the broad ligament the uterine artery with its accompanying veins is seen skirting the side of the cervix near the internal os. On the opposite side a similar system of vessels is encountered. We may then roughly compare the hysterectomy with amputation at the cervix to an ordinary amputation with four main vessels, the ovarian and uterine on each side.

Where the growth is situated in the body of the organ and the cervix is long, the operation is, as a rule, quite simple. The round ligament are first tied and the organ can be lifted still higher out of the abdomen. Portions of the ovarian vessels passing to the uterus are controlled at the uterine horn and the uterus is freed on each side. After opening up the broad ligaments laterally and separating the bladder reflection anteriorly, the uterine vessels are readily exposed and tied. Many operators employ only cat-gut for the uterine and ovarian arteries. We still feel much safer with silk, and always use it for the larger vessels. After tying the uterine arteries, taking of course good care not to include a ureter in the ligature, we cut through the cervix, encountering little or no bleeding except from the tumor. We usually cut the cervix slightly and then close with cat-gut sutures. Only occasionally is the cautery introduced into the cervical canal. The broad ligaments are then closed with continuous cat-gut sutures, care being taken to cover over the stumps of the appendages. The bladder peritoneum is drawn over to that of the posterior surface of the cervix. The pelvis now presents a perfectly smooth surface offering little opportunity for the subsequent development of intestinal adhesions.

*Hysterectomy with Removal of the Appendages.*—If it has been deemed advisable to remove the ovaries, the operation is carried out in precisely the same manner, save that the ovarian

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vessels are tied just before they reach the ovary instead of on the uterine side.

While many hystero-myomectomies offer little difficulty, others are by no means so easy. Sometimes the growths are exceedingly large and so distorted that it is at first hard to get one's bearings. Under such circumstances it is always advisable to seek out the round ligaments and sever them at once. This invariably renders the tumor more mobile. The left tube and ovary are then usually tied off and the tumor rolled outward and to the right, as recommended by Dr. Kelly. The uterine vessels on the left side are now controlled and severed, and the cervix is cut across with the upright slant so that the cervical stump, and consequently the uterine vessels left on the right side, will be longer. Clamps are applied to the right ovarian vessels and the entire tumor is removed *en masse*. It is astonishing with what ease an otherwise difficult operation is rendered comparatively simple by this "from left to right" operation of Kelly. Great care must be taken with the ureter, and if the operator has the least suspicion that one or both have been injured he should seek each ureter as it crosses the pelvic brim and follow it through the pelvis and carefully outline it to its vesical insertion.

Several months ago I had a very difficult hystero-myomectomy in which the patient was exceedingly anemic and the vagina was filled with a very vascular submucous myoma. While liberating a subperitoneal nodule adherent to the right pelvic brim, I found it necessary to tie the ovarian vessels. There was only one point at which the vessels could be controlled and that merely wide enough for a single ligature. After having emptied the pelvis I felt rather uneasy about the right ureter, although no suture had been placed anywhere near the usual ureteral site. As a matter of fact the ureter had been included with the right ovarian vessels. It was released with ease and the patient made a perfect recovery.

Sometimes the ureter is carried up out of the pelvic cavity by large tumors, and there is great danger of it being tied or cut. If, after tying the round ligaments and releasing the tube and ovary, the blunt dissection be carried down close to the uterus, the danger is minimized. In some instances it may be necessary to perform a preliminary myomectomy, thus diminishing greatly the size of the uterus and allowing the ureters to drop back into their normal position. The same result may be accomplished by bisection of the uterus.

*Bisection of the Uterus.*—In not a few instances, on opening the abdomen, the operator is confronted with a very discouraging problem. The pelvis is filled with a nodular tumor glued everywhere to the omentum and intestinal loops or

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firmly wedged in the pelvis. In some of these cases it is next to impossible to gain a point of cleavage, and were it not for bisection of the uterus the operation would either have to be abandoned or the resultant injury to the intestine from the difficulty in the separation of adhesions would be so great that the chances of the patient's recovery would be minimized. In such difficult cases the uterus is firmly grasped with mesoforceps on each side and the organ is boldly split in the middle. As the incision is increased fresh mesoforceps grasp the uterine walls on either side, and eventually the entire organ is separated into two halves or divided as far as the cervix. We would naturally expect to see injury to the surrounding parts, but by this operation we reach the adhesions from their under surfaces, where they are lightest. You would also naturally expect much hemorrhage, but if the uterine halves are kept taut with the mesoforceps no danger from this source is to be feared.

With the uterus now in halves the respective portions are removed entire or amputated through the cervix, the vessels being controlled in reverse order to the usual method, namely, first the uterine, then the round ligament, and finally the ovarian vessels. The remainder of the operation is completed in the usual way.

*Abdominal Hysterectomy with Preliminery Amputation through the Cervix.*—In a certain number of cases, in which the adhesions are so great that bisection of the tumor is not feasible, it may be possible after severing the round ligaments to push down the bladder so that the cervix is exposed. The uterine vessels are then clamped on both sides and the cervix is cut through. The cervix is then drawn strongly forward and Douglas' sac is opened from below. The broad ligaments are then clamped and the tissues cut. The cervix is now drawn still further upward and all the adhesions are gradually separated from the under surface. The ovarian vessels are clamped on each side and the tumor is delivered. In these desperate cases all vessels have been clamped and the organ is removed without a ligature having been applied. The vessels are tied with silk and the operation is completed in the usual way.

Where the intestines are densely adhered to the tumor, always sacrifice the part of the myoma, or its overlying layer of uterine muscle, as the case may be, leaving it attached to the intestines. This raw flap adherent to the gut is now turned in on itself in such a manner that the bleeding is checked and a smooth surface left.

*Complete Abdominal Hysterectomy.*—While amputation of the cervix is usually preferable, first, because it is easier, and secondly, on account of the remaining portion of the cervix

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forming a good firm support for the vaginal vault, still in not a few instances the complete operation is clearly indicated. For example, where a large cervical myoma exists there is often no normal cervix left and the growth has so encroached on the vagina that a small cuff of this must also be removed. In these cases, after tying the uterine arteries low down near the ureter it is not very difficult to free the mass on all sides until the vagina is exposed. In every case, however, where there is great danger of injury to the ureters these should be carefully outlined to see that they are intact.*

In all cases in which we suspect adeno-carcinoma, or development of sarcoma in a myoma, splitting of the uterus should never be performed, as we run the risk of not only implanting cancer and sarcoma cells upon healthy tissue, but also of setting up a general peritonitis, as in these cases virulent pus organisms are very liable to be present. Knowing that we may at any time encounter malignant growths in the uterus, when we are operating for myoma, I have made it a rule where the uterus has been amputated at the cervix to always have the organ opened at once, so that, if perchance, a malignant growth exists, the cervix may also be removed before the abdomen is closed.

*Treatment of Myoma Complicating Pregnancy.*—If pregnancy occurs when the uterus is studded by large and small myomata, which apparently encroach on the uterine cavity to such an extent that they almost preclude the possibility of the pregnancy advancing over a few months, hysterectomy should undoubtedly be performed, irrespective of the ovum. In other cases in which the myoma is cervical, and so plugs the pelvis that labor through the normal passages is impossible, the question should be laid squarely before the family, and the alternative of complete hysterectomy at once, or Cæsarian section at term, followed by hysterectomy at a later period discussed. The uterus might possibly be removed immediately after the Cæsarian section, but the parts are so vascular in the pelvic floor, and a large cervical myoma is often so difficult of removal that no fixed rule can be laid down, and the surgeon must use his own discretion in the individual case. Recently I saw a patient who was eight months' pregnant, who had a myoma as large as a child's head, situated in the anterior uterine wall. Three surgeons were sure that Cæsarian section would be necessary; two considered normal labor possible. All preparation was made for operative interference, but the patient fortunately had a normal labor.

*Treatment of Submucous Myomata.*—Where the submucous

* Doyen's operation where Douglas' sac is opened, the cervix firmly grasped and drawn backward and upward and then freed from the vagina on all sides and the uterine vessels are clamped and cut, is also a method of complete hysterectomy to be strongly recommended.

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myoma is small, and situated far up in the body and no discharge exists, it will often be advisable to open the abdomen, split the uterus and remove the nodule, sewing up the rent in the uterine mucosa, and then uniting the muscle. If the myoma projects through the cervix where it can be grasped, it is often possible to bring it down, and we can control the pedicle by two or three cat-gut sutures. If it be impracticable to reach the pedicle, the cervix may be split anteriorly until the necessary exposure is obtained. If the nodule is very large and fills the vagina, delivery by obstetrical forceps is at times feasible; but as a preliminary measure it may be necessary to incise the peritoneum to obtain the requisite space.

In a recent case the vagina was completely filled by the growth and the hemorrhages had been very profuse and frequent. I endeavored to build up the patient, but without success. We waited until within a few days of the next period so that she might rally somewhat. On attempting to wash up the vagina the hemorrhage was alarming. I accordingly desisted and opened the abdomen at once, fearing that any more vaginal interference until the uterine vessels were tied would render her pulseless. After all the blood supply had been cut off, the nodule was readily drawn up through the abdominal incision with the accompanying multinodular myomatous uterus.

Where a sloughing submucous myoma exists, the utmost care is necessary. If there be little bleeding, it will be safe to delay operation a few days and frequent douches of a 1 or 2% formalin solution should be given. Where there are no other myomatous nodules and where the offensive discharge has ceased the myoma may be treated as a simple submucous nodule and removed. If, however, the uterus be large and studded with other growths, the cervical lips may be sewn together, the vaginal portion of the growth having been removed some days previous. The vagina is then thoroughly douched with a 2% formalin solution and bichloride and complete abdominal hysterectomy performed. Unless the chances of infection from the uterine cavity be reduced to a minimum, the probability of general peritonitis is great.

*When not to Operate in Cases of Uterine Myomata.*—It is only after studying many cases and following, as it were, their life history that we can get the true perspective and determine with any degree of accuracy when to operate, or in what cases it would be better surgery to refrain from interference. This is especially the case when considering the treatment of uterine myomata. We all know of patients who have had myomata for many years and yet suffered no inconvenience whatever. Others have experienced some trouble, but not sufficient to

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interfere with their daily work. Judging from these cases alone we would naturally infer that no operation would be necessary unless the myoma attained very large proportions. From our work on the subject, however, we find that unpleasant consequences may follow ultra-conservative treatment. In the first place we have seen that uterine hemorrhages often become profuse and frequent, occasionally amounting to from 1 to 2 litres at a time. Then again the general health gradually yields under the constant loss of blood. After a time pressure symptoms not infrequently develop, accompanied by gradual interference with locomotion. Again, we have to bear in mind that these growths may be so situated as to effectively prevent a normal labor. With the formation of adhesions there is some danger of intestinal obstruction and an operation, where such a complication exists, is most unpromising. Finally, we must remember that in fully 1 per cent. of the cases sarcomatous degeneration of the myomata occurs,* and in another 1 per cent. carcinoma complicates myoma; so that in practically 2 per cent. of all uterine myomata a malignant growth also develops at one period or another.

*The Operative Results in Myoma Cases.*—It is not many years since the mortality in simple myoma cases was excessive. To attempt removal of a large and adherent myomatous uterus was rarely undertaken. But during the last decade the technique has been so perfected that in some clinics the mortality in simple cases is not over 3 per cent., and in Naples last fall, Professor Spinelli informed me that he had just operated upon 100 cases with a mortality of over 1 per cent.

With such advances in surgery, bringing with them so marked a decrease in the mortality of these cases, have we the right to advise against operative interference, with the possibility of hemorrhage, loss of health, pressure symptoms, septic infections, intestinal obstructions, staring us in the face and even the remote likelihood of sarcomatous degeneration or carcinoma? And this is not all. When giving our verdict in this or that case, it is on the assumption that our diagnosis has been correct. Unfortunately, we are not infallible. Less than seven weeks ago, I saw in consultation a patient complaining of slight hemorrhage, and with a uterus about twice the natural size, rather firm, and feeling exactly like a small uterus containing a nodule the size of a small apple. To clinch the diagnosis were two small nodules, each about 2 cm. in diameter, one on the posterior surface of the uterus, the other at the right cornu. She asked if it were cancer, and I informed her that it was without doubt a myoma. On account of bleeding, I advised hysterectomy, and to my surprise the growth proved to be an

*This is a very conservative estimate, as some have noted it in 2 per cent.

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adeno-carcinoma of the body of the uterus, while the two supposed small myomata were situated at points at which the cancer had extended entirely through the uterine walls, forming secondary growths on the surface of the organ. They were already adherent to the small intestines. With my eyes closed, and that uterus in my hand, I should undoubtedly have diagnosed the case as one of myoma.

Nor are these cases by any means rare. I removed a uterus, the size of a four months' pregnancy, two years ago, and, to my surprise on opening it, I found it the seat of an extensive nodular carcinoma, no myoma being present. Two weeks ago one of my colleagues removed a uterus about the size of a four-months' pregnancy. Pregnancy, however, was absolutely excluded, and the specimen was sent to the laboratory with the supposition that the growth was a myoma. On opening the organ, we found a cancer just above the internal os. This had blocked the cervical canal, and the uterus was distended by fully 500 cc. of blood. On three different occasions I have opened the abdomen expecting to find myomata. In each the history was absolutely against pregnancy, but upon this we cannot rely in the majority of the colored race. In each of the three I carefully made an incision until the nodule was detected and then did a hysterectomy. These are but a few instances of the difficulties that arise in making an absolute diagnosis in cases in which myomata are suspected.

After a careful study of many cases, and finding that the operative mortality is as low as, or even lower than that which follows where patients are not subjected to operation, I feel that the only patients that should be advised against operation are those who exhibit no symptoms, or where the myomata are very small, and give rise to little or no trouble.

I am afraid my remarks have been too lengthy, but the subject is a very important one, and merits, I feel, all the time you have so kindly allowed me to occupy.

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# A CASE OF BRAIN TUMOUR WITH UNUSUAL LOCALIZING SYMPTOMS.

By W. B. THISTLE, M.D., L.R.C.P., London.
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The following report of a recent case of brain tumour is of special interest because of the somewhat unusual situation of the growth, and because the symptoms, from the first, enabled one to locate very definitely the position of the tumour.

The patient was admitted on the surgical side of the Hospital for Sick Children, under the care of Mr. Cameron, who has kindly permitted me to present the case from the medical standpoint.

As will be seen from the report and the specimen presented, the *post-mortem* discovered a tumour in the exact location, and implicating those structures to which attention had been directed by the localizing symptoms. Additional interest is attached to the case because of the localizing significance of a symptom prominent in this case namely, bilateral nerve deafness.

On December 10th, 1901, the patient, a well-grown, healthy-looking boy of six years, had a fall, striking and injuring the right side of the head. There was considerable swelling on right side of the face, in the superior maxillay region. Some of his teeth were loosened, and his nose bled.

Three or four weeks later he vomited frequently, but less frequently after another two weeks. Early in January the sight of the right eye began to fail, and he complained of headache between the temples. Gait became staggering, with a tendency to fall to the right side. About the middle of February hearing in the right ear began to fail. Since that time, both sight and hearing have failed quickly. About the end of February the left ear and eye became affected. On admission he was said to be completely deaf for one week.

Examination of eyes by Dr. J. M. MacCallum. Double optic neuritis present; vessels swollen; veins full and tortuous. About disc there are a number of whitish spots. Pupils widely dilated; equal, and contract to light slightly; accommodation to distance lost. Slight lateral nystagmus. Sight vision in upper field of both eyes, very little power of vision remaining. Right eye a little better than the left.

Examination of ears. External and middle ear normal. Hears tuning-fork slightly when placed on cranium. He can hear and understand when spoken to loudly.

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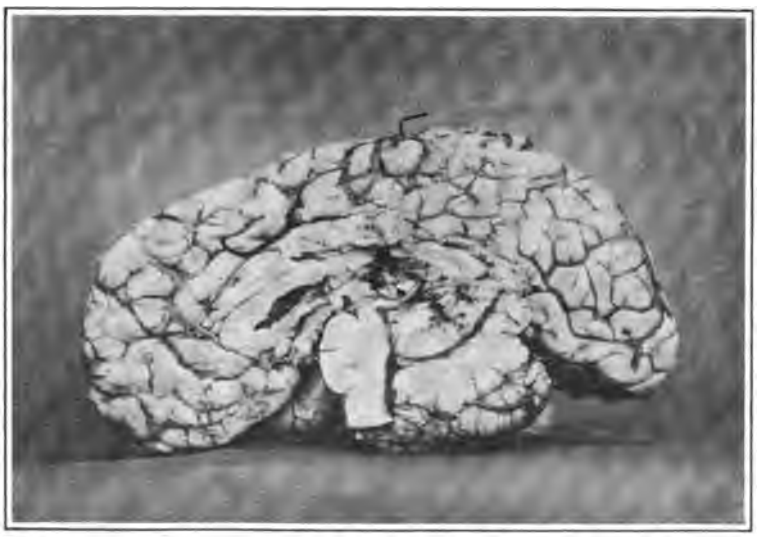
Sense of smell and taste preserved.

Sensation of pain, temperature, and touch present.

Digestion. Voracious appetite. Bowels and urine involuntary.

Muscular power is good throughout. He can hold himself up by his hands. Can move legs freely in bed, but cannot stand or sit up. He can support himself, but if allowed to stand alone, would fall backwards. Is able to feed himself if food is placed in his hands.

March 29th. Totally deaf in both ears. Complains of toothache. Appetite ravenous, will eat anything, and at all times. He talks away quite cheerfully, but has said nothing to indicate that he had noticed anything about him, His conversation is quite rational, and he is evidently talking to his friends at home.



Reflexes. Plantar absent on the right sight, present on the left. Great toes are extended, the others flexed. Knee jerks absent.

March 30th. Temperature 102, pulse 140, respiration 32. Semi-comatose. Takes food. No difficulty in swallowing. Absolutely blind and deaf.

April 7th. Sense of smell could not be demonstrated present. Pupils widely dilated. Kernig's sign present. Slight paralysis of Ext-rectus in left eye. Resonant note discovered over cranium.

April 10th. Mr. Cameron removed a button of bone from

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the tempero-sphenoidal region. Brain showed no pulsation, and was resistant. A trochar was inserted in the direction of the lateral ventricle, bringing away a considerable quantity of perfectly clear watery fluid. No improvement followed the operation on the head, except a slight relief of pressure symptoms.

April 15th. Clonic spasm in left arm.

April 17th. Arms and legs quite rigid at times. For some time a watery discharge from the left ear. Temperature continues moderately elevated. Resonant note on percussion of skull. Complete paralysis of the right side of face evident. Right eye remains open, while the left is closed. Movement of left arm and leg, but no movement of right arm, and slight of right leg.

Death occurred on May 6th.

I had frequent opportunities of studying this case, and on two occasions had utilized the case for clinical lecture. My diagnosis was, tumour in the mid-lobe of the cerebellum, implicating the corpora quadrigemina, and the auditory paths above their nuclei, interfering also with the nuclei of the optic nerves in the Geniculate bodies. Mr. Cameron's exploratory puncture, disclosing ventricles much distended with clear fluid, seemed confirmatory of growth in the region mentioned which occasioned obstruction at the iter, and consequent accummulation of fluid in the lateral ventricles.

In the cases of disease of the brain there are three questions to determine.

1. The nature of the disease.
2. If abscess or tumour, its location.
3. If a tumour, the nature of it.

Concerning the first question, the history of the case, the gradual development from week to week, over several weeks, with the absence of the usual symptoms, excluded meningities; and the presence of headache, optic neuritis, and vomiting with general disturbance, pointed to local disease, most likely abscess or tumour. Abscess unassociated with some disease of the ear, or obvious connection with a suppurative process in some part of the body is somewhat rare. There was an absence of other signs of abscess, e.g., slow pulse, low temperature, wasting chills, sweating. It, therefore, seemed much more probable that a tumor was the cause of the disturbance.

Regarding the location of the growth, the early history of the case pointed strongly to the cerebellum. Difficulty in maintaining equilibrium was an early symptom. The boy soon became unable to walk, or to sit up in bed. This existed without loss of muscular power in any part of the body. Clearly the growth was neither in the motor area nor in the

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motor tract. The boy was quite bright, and perfectly rational until almost the last. He had no difficulty with speech. This would seem to exclude the frontal region. A growth at the base, or in the region of the pons would early implicate some of the cranial nerves. Until the last weeks of his life there was no paralysis of the cranial nerves, other than the special nerves of sight and hearing.

After the disorder of equilibrium, which suggested cerebellar disease the next most suggestive symptom was the almost simultaneous deafness in both ears. The loss of hearing occurring gradually until deafness was complete. This symptom is highly suggestive of disease of the corpora quadrigemina, a lesion in that region interrupting the paths of both cochlear nerves as they pass up from the pons to corpora quadrigemina, brachia and on through the internal capsules to their cortical termination in the tempero-sphenoidal lobes. In Albutt's system, symmetrical nerve deafness it is said, may be due to symmetrical disease of the tempero-sphenoidal lobes; to disease of the corpora quadrigemina, or medulla, or to bilateral disease of the internal ear from Syphilis. Clearly the first or the last cause is not in operation in this case.

Granted that the diagnosis of tumour was correct, the disordered gait with absence of implication of the cerebral functions of motion and sensation, is strongly suggestive of cerebellar disease. Again given a cerebellar tumour, the association of double deafness, gradual in development locates the disease in the anterior portion of the mid-lobe, for in this location extension of the tumour destroys the corpora quadrigemina, and the central or supra-muclear paths of both auditory nerves. Of nineteen cases of tumour of corpora quadrigemina reported in Albutt's system in nine there was deafness, double in five cases.

The third notable symptom of localizing value was, early loss of vision. In conjunction with double deafness, the early blindness is probably due to extension of tumour to the Geniculate bodies, which contain the optic nuclei. Optic atrophy had not had time to develop. The early symptoms were cerebellar gait, double deafness, double blindness. On admission the boy was noticed to have widely dilated pupils, and lost accommodation. This might be due to implication of the corpora quadrigemina. Experimentally a lesion of the inferior corpora quadrigemina causes dilation of the pupils. Pressure on the iter was the probable cause of the distension of the lateral ventricles with clear fluid.

The later symptoms are not of special significance and were due to general pressure, and extension of the growth. Paralysis of sixth; infranuclear paralysis of the right facial, hemiplegia were some late developments.



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Throughout it was noticed that the note over the skull was highly resonant. MacEwan of Glasgow, considers that if this symptom is present in case of abscess or of tumour of the brain, it is highly suggestive of location in the cerebellum. He attributes the changed note to distension of the ventricles.

The tumour, as can be seen from the specimen, occupies the space anterior to the mid-lobe of the cerebellum and incorporates the crura cerebri, iter, corpora quadrigemina, optic thalami.

The mass is about as large as an orange and is gliomatous in nature. The dark circle in the photograph indicates the limitation of the morbid tissue.

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## IMMUNITY IN THE LIGHT OF RECENT STUDIES.*

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"When an organism, subjected to the action of some influence noxious to certain other organisms, is found to be insusceptible to it, that organism is said to be *immune* to that particular noxæ." Here is the broadest possible definition of "immunity," and covers not only the action of bacteria and their toxins but also other poisons or harmful conditions.

It has been for some time recognized that in bacteriology we have to deal with two kinds of bacteria, one which secretes or produces a powerful soluble toxin which can be developed in cultures and in the body spreads widely, and to which belong the bacilli of tetanus, diphtheria and botulism; and of a second-class, to which belong most of our ordinary pathogenic bacteria which do not produce such a toxin. For the first of these groups we have learnt a method of protection in the production of an antitoxin, the best example, of course, being that for diphtheria. For the second group we have as yet no such method of protection and all our studies point to the necessity of producing a curative serum of a different type, hence the great value of gaining a closer knowledge of the mechanism of their toxic action and of preventing their growth in the body.

The well-known Widal test for typhoid was one of the first practical applications of the later studies of bacterial action. This test depends on the property acquired by the blood of

*NOTE.—The aim of this article is to present clearly and as simply as possible for the practising physician some of the new view-points on our resistance to disease, which have been developed by the later work in Pathology, Physiology and Bacteriology, and in the development of which the author became interested as the result of a research carried out in the Pathological Laboratory of the University of Toronto under Prof. Mackenzie and Dr. Silverthorne and which led to further allied study in the Laboratory of Physiology of the University of Pennsylvania.

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typhoid patients when added to cultures of the typhoid bacilli in bouillon, of causing the bacilli to loose their motility and to gather together into adhering clumps. A phenomenon readily observed with the microscope. It was found also that if guinea-pigs were injected with increasing doses of typhoid bacilli, their serum also acquired the power of agglutinating or clumping the bacilli in a culture. Similar experiments were made with other bacteria and were very successful with the active cholera vibrio. Here, too, the guinea-pig rapidly became so resistant that it could take many times the fatal dose of cholera without suffering. The guinea-pigs had, in other words, become immune to cholera. Its serum would also cause agglutination of the bacteria, or if the immunity were strong enough would cause complete solution of the bacteria. This phenomenon we name "*bacteriolysis*" (from *luo*, to dissolve). Bacteriolytic sera have also been developed for typhoid and many other bacteria. These interesting phenomena were at once seen to be of importance and carefully studied. It was quickly found that if such immune sera were heated to 55 deg. C., the bacteriolytic power was destroyed while the agglutinating power remained, but the further addition of normal serum which in itself possessed no bacteriolytic power at once produced bacteriolysis.

At this point several observers were led to study the injections of other foreign bodies, especially red-blood cells, into various animals, and study their blood serum to ascertain whether like phenomena could in these cases also be detected. From the success of these experiments a flood of light has been shed upon the subject, owing largely to the much greater facilities for studying such cells and their changes, on account of their size than are afforded by bacteria.

*Experiment I.*—Some defibrinated guinea-pig's blood is centrifugalized, the clear serum is poured off and the red cells placed in a 0.85 per cent. salt solution, again centrifugalized and suspended again in saline and in this way freed from serum. In such a suspension the cells will, on standing, slowly sink to the bottom leaving the saline clear and colorless. To such a suspension of guinea-pig's red blood-cells in a test-tube a few drops of rabbit's blood serum is added and the test-tube put in the incubator at 37 deg. C. and left for some hours. At the end of this time the supernatant saline will be found to be clear and colorless. To a similar suspension is added the same number of drops of serum from a rabbit which has been "immunized" against guinea-pig's red cells by receiving successive injections, intraperitoneally, of defibrinated guinea-pig's blood at intervals of about a week. About five injections, increasing from 5 c.c. to 20 c.c., will be found to be sufficient. After standing at 37 deg. C. for even a few minutes the saline solution will be seen

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to be darkly tinged with red, due to the dissolving of the hemoglobin out of the cells. Clumping, agglutination of the cells may or may not occur.

This experiment evidently shows that the rabbit has developed some protective mechanism against the guinea-pig's red blood cells, and which acts as a toxin to these cells similarly to the bacteriolysin developed for cholera or typhoid bacilli. This phenomenon in the case of red cells we designate as hemolysis. Further experiments have shown that the hemolysin so produced will dissolve only guinea-pig's red corpuscles, and leaves the serum normal in its reaction to cells of other species of animals. The action, in other words, is a *specific* one.

*Experiment II.*—Some of the rabbit's serum immune against guinea-pig's red cells is treated for half an hour to 35 deg. C., and is then added to a guinea-pig's red-blood cell suspension as above. At the end of several hours in the thermostat no hemolysis has taken place. A few drops of serum from a normal rabbit, which is not in itself, as we have seen (Experiment I.), hemolytic is added and hemolysis occurs.

In this case, too, as in that of the bacteriolysins, there are two bodies concerned in the reaction, one which is normally present in the serum, and one which is produced in the course of our immunization. This latter body, on account of its method of production, is called the "immune body"; it is only destroyed by heating to 65 deg. C.; it is much more resistant to chemical action and to the effects of standing. The other body we name the "complement." It is destroyed by temperatures above 55 deg. C., is readily destroyed by chemical action, and by standing.

*Experiment III.*—The amount of our immune serum necessary to completely hemolyse any given amount, say 5 c.c. of a 5 per cent. suspension of guinea-pig's red-blood cells, can readily be found by placing in a series of test-tubes equal amounts of our suspension and adding increasing amounts of our immune serum to successive tubes. The tube receiving the least amount of serum, and yet showing complete solution, indicates the amount required. To a suspension of guinea-pig's blood cells only enough immune serum to cause complete hemolysis is added, and the mixture at once cooled and placed on the ice at 0 deg. C. for some hours; no hemolysis occurs, and the cells have settled to the bottom of the clear fluid. The clear fluid is removed and added to a fresh suspension and placed in the thermostat. Again, at the end of an hour or two, no hemolysis has occurred, but on adding immune body only in the form of a few drops of heated immune rabbit serum the solution becomes red. Consequently our clear fluid must have contained complement, but no immune body. The red-blood cells from

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which we removed the clear fluid are now washed with saline to remove any traces of our original fluid, and again suspended in fresh saline. If placed in the thermostat no hemolysis occurs until a few drops of normal serum containing complement is added, when hemolysis occurs.

Evidently at 0 deg. C. the chemical reaction between cell and immune body can occur, and hence the immune body became united to the cells and removed from the fluid; while the reaction between the complex thus formed and the complement was unable to take place. This general method of separating complement and immune body is not always successful. In some cases, too, it has been shown that immune body and complement unite before uniting with the cell. In consequence of these facts we must look upon the immune body as an "intermediary body," which forms a binding *link* between the cell and complement, and whose action is in itself not a deleterious one, while that of the complement is. The complement is the real toxin for the cell.

*Experiment IV.*—A suspension of rabbit's blood-cells, another of sheep's blood-cells, are prepared, and to test-tubes of each some serum from a normal dog is added. Both test-tubes are placed in the thermostat, and in both hemolysis takes place.

We have here in dog's serum a natural hemolysin for both rabbit's and sheep's blood. Experiments such as No. II. will show that there are two bodies—immune body and complement—present, especially if an experiment such as No. III. be performed, only that rabbit's serum is used to supply complement instead of the naturally hemolytic dog's serum. And here, too, we find that we may in some cases take our immune body, whether natural or acquired, from one species of animal and our complement from another species.

*Experiment V.*—The amount of such natural immune serum necessary to completely hemolyse any given amount of either rabbit's or sheep's blood can readily be found by using a series of test-tubes, as described for Experiment III. To a suspension of rabbit's cells is added just the quantity of dog's serum necessary to hemolyse them, and after standing some hours in the cold the clear fluid is poured off and added to a suspension of sheep's cells. To the rabbit's cells saline and normal rabbit's serum, complement, are added, and both test-tubes are placed in the thermostat. In both hemolysis occurs.

We must infer from an experiment such as this that in such a natural immune serum there are present two kinds of immune bodies, one of which will only unite with rabbits' cells, the other only with sheep's cells. That each immune body has a specific action. In fact, experiments have shown that dog's serum contains specific immune bodies also for rat, goat and guinea-pig.

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Goat's serum is naturally hemolytic for rabbit's and guinea-pig's bloods, but if filtered through a pukalla filter the first part of the filtrate will only hemolyse guinea-pig's red-blood cells, though immune bodies for both are present. This, with many other experiments shows that there are different complements which will only react with certain immune bodies.

*Experiment V.*—To suspensions of dove's and human red cells goat's serum is added. After standing in the thermostat for some time the cells will be found to have agglutinated and be fairly clumped together, but no hemolysis has taken place. To goat's serum is added such an excess of either of these kinds of blood cells that it is no longer able to agglutinate them, and then the serum is added to a suspension of guinea-pig's blood. Hemolysis of the guinea-pig's cells takes place readily.

Many experiments point to the fact that hemolysins and agglutinins are distinct bodies and have nothing to do with each other. Agglutinins can also be readily produced by immunization and usually appear earlier than the hemolysins. Serum may be heated to between 65 to 70 deg.C. without destroying its agglutinating power. Further studies have shown us that not only hemolysins and hemoglutinins may be produced, but also nephrolysins, hepatolysins, etc., by the injection of the appropriate kind of tissue. Two or three observers, who have by successive injections of an emulsion of kidney cells produced strong nephrolysins, find that the injection of such a serum into the species of animal whose kidneys were used, will bring about a nephritis, and in large enough doses, death. The injection of natural or acquired hemolytic serum is, of course, fatal, if the dose be large enough. It was undoubtedly from the presence of these various toxic bodies that are naturally present in normal blood that transfusion from one species of animal to another often resulted fatally to the animal receiving the transfusion. And this may even be the case in the transfusion from one animal to another of the same species, for in several experiments Ehrlich injected goats with large quantities of other goats' blood and in this way succeeded in getting a serum which was hemolytic for the blood of some other goats, though not for all. Hence, the injected blood must have had some action in the first goat.

Dr. Longcope, at the University of Pennsylvania, examined the blood in several cases of chronic diseases, cirrhosis, nephritis, etc., and measured the amount of complement present that would unite with the immune bodies for bacillus coli and bacillus typhosus and found that terminal infections occurred in those cases in which the amount of complement fell. Other observers have also had similar results.

Professor Flexner and Dr. Nogachi undertook the study of

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snake poisons in the light of these facts, and they found that it contained immune bodies for many kinds of tissue cells, the complements for which are supplied by the animal into which they are injected, as well as several kinds of agglutinins. Amongst them are those which attack red-blood cells, nerve cells and endothelial cells of the smaller blood vessels. The multitude of small hemorrhages found in death from cobra venom is due to the action of this last variety. In all probability the small hemorrhages found in many diseases is due to a similar endothelolysin. Earlier observers had shown that cobra venom consisted of several very complex albuminous bodies, and the results of several studies of natural and acquired hemolysins point to them being of the same character. Dr. Kyes, working in Erhlich's laboratory, has made the important discovery that lecithin, a well-known complex fat occurring normally in the human body, will serve as complement for certain of the immune bodies present in cobra venom.

Of antitoxins that for diphtheria is the best known example. It is produced by injecting a horse with increasing doses of the soluble toxin produced by diphtheria bacilli in culture. The bacteria are not introduced. The horse is somewhat feverish after every injection and shows the effects of the poison, but in time can take many times the dose of toxin that would originally have been fatal. Its serum has acquired an antitoxin which neutralized the toxin.

The theory used to explain all these considerations is one prepared by Ehrlich. We must imagine the molecule of living protoplasm in every cell, consisting of many thousands of atoms, as undergoing continual change, ever taking up food-stuffs and giving off waste materials, any food or other chemical body, in order to enter into or effect the protoplasm, must be able to unite chemically with some of its constituent chemical groups. We must imagine also that other bodies may enter into union in many different ways, either being simply added on or being changed or changing the whole molecule in the process. He suggests, too, that there are certain simple groups of such a character that they unite readily with food bodies or with toxins or other chemicals. Should toxin groups unite they may break up the molecule, or if not able to do that they will prevent the molecule from obtaining food. The changes, however, taking place in the protoplasm molecule, will tend to produce other groups capable of taking up food or toxin and thus preserve its life.

As taught by the law of compensation and excess production, these groups will be produced in excess and will be cast off and be found free in the serum. When thus cast off they form the antitoxin and can unite with the toxin and thus prevent its

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uniting with the cell. Excess groups of a similar but more complex character form the immune bodies, only they are so constructed that they cannot only unite with the toxic bodies the complements, but can link them onto the cell. The complements are also such complexes which have the property of acting as ferments, breaking up and making ready for use within the cell any chemical complex with which they are united. That they, too, are produced in the cell seems to be proven by the fact that Dr. Kyes has shown that certain blood cells contain the complement necessary for hemolysis when united with a cobra venom immune-body within themselves.

From these facts we see that we may have immunity due to several causes, in addition to those more or less mechanical causes which prevent the entrance of bacteria or toxins into the body. These may be, first, bodies of the nature of agglutinins which, while they may not cause the disintegration of bacteria, may prevent their spread; secondly, the introduction or production of an antitoxin; thirdly, the formation of a lysin which will kill the bacteria; fourthly, the inability of the toxins or immune-bodies, and, in all probability, bodies of this nature are also formed by the bacteria, to unite with the protoplasmic molecule at all. As specific immune-bodies produced by injection, and as also specific complements have been found in placental or fetal blood and in that of the new-born, and also in the mother's milk, an explanation is here given for some cases of hereditary immunity.

Further, in order to produce a curative or preventative serum we may proceed in various ways: First, by producing a specific antitoxin, by injecting toxin into an animal as is done for diphtheria and tetanus; secondly, by inoculation with a modified or weakened organism, as is probably done in vaccinia, and so producing within the animal to be protected specific immune-bodies; thirdly, by producing in the animal by inoculation specific immune-bodies which, when transferred to the animal to be protected, will find a complement suitable to them within the animal, or by introducing with such an immune-body complements with which it may react.

Perhaps for all of us the most interesting point in all this work is the demonstration of the wonderful complexity of the chemical processes going on in even such cells as the red-blood corpuscles and in indicating to us in what manifold ways the cells may take up their nourishment and give off their waste products or secretions.

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# Editorials.

## THE ONTARIO MEDICAL ASSOCIATION.

The recent meeting of this Association was in all respects good. While not brilliant in any way it was *well balanced:* there was no hitch of any kind. The papers were practical and interesting, while the discussions were quite above the average. The "smoker" was a great success, while the luncheon was the best the Association has known. Probably the most satisfactory feature of the meeting was the large attendance of young physicians who were warmly welcomed by their former teachers.

We are told that there was some talk about the selfishness of the Toronto doctors as shown by the fact that only Toronto men were placed on the nominating committee. The writer, however, heard not one word of the sort, and is inclined to think that reports in this regard are much exaggerated and unjust to one who is really a *good fellow* and a strong friend of the Association. The selfishness of Toronto men is scarcely worth discussing. It undoubtedly exists and no discussion will diminish it. At the same time we know of no town large enough to accommodate the Association which has not a little of the same commodity. However, according to Musser "the less said about Caligula the better." Let us apply this rule to our selfishness!

Let us consider what are the best interests of the Association. Should it be peripatetic? Many of us in Toronto would much like to see it so if it were in the interests of the society. Most of us who had the opportunity voted for the three outside meetings held at Hamilton, London and Windsor, respectively. These meetings, unfortunately, were comparatively small, and not altogether successful. The writer has studied this matter very carefully for over twenty years, and is satisfied that at least three-fourths of the members outside prefer Toronto as the permanent place of meeting. As to the Presidency it should go outside Toronto as often as possible. Unfortunately an outside President is, to a large extent, handi-

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capped because he cannot prepare for a meeting as well as one in Toronto. This year the nominating committee first recommended Dr. Ingersoll Olmsted of Hamilton for the presidency, but he preferred not to become President now as he is likely to spend a portion of the coming year in Germany. In consequence Dr. James F. W. Ross, of Toronto, was unanimously recommended and duly elected.

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## CANADIAN MEDICAL ASSOCIATION.

As already announced through the columns of this journal, the thirty-sixth annual meeting of the Canadian Medical Association will take place at London, Ont., on the 25th, 26th, 27th and 28th of August, with Dr. Walter H. Moorhouse, of that city, as President. Dr. George A. Hodge, Queen's Avenue, is chairman of the Programme Committee, and Dr. Hadley Williams, Park Avenue, is Local Secretary, to either of whom or to the General Secretary, Dr. George Elliott, 129 John Street, Toronto, titles of papers may be sent. Arrangements for reduced fares on the regular standard certificate plan have been already completed with the Grand Trunk and Canadian Pacific Railways, while negotiations are now in progress with the Intercolonial and the Canadian Pacific officials as to transportation rates from the Martime Provinces and points west of Fort William. These arrangements will be published in full in due time. In addition to those who have consented to read the regular addresses, the following have signified so far their intention of being present and contributing papers: A. M. Rosebrugh, Toronto; Perry G. Goldsmith, Belleville; T. Shaw Webster, Toronto; R. Ferguson, London; A. Lapthorn Smith, Montreal; Henry Howitt, Guelph; Alexander McPhedran, Toronto; E. G. Wood, Nashville, Tenn.; C. W. Wilson, Montreal; Geo. H. Aylesworth, Collingwood; Jennie G. Drennan, St. Thomas; Adam Wright, Toronto. This list is every day being added too, and the Programme Committee is desirous that those contemplating should send in their titles without further delay. Entertainment is in the hands of a strong committee, and London is quite sure to do itself proud in this direction. It is understood

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that Western Ontario is going to turn out very strong to the support of London, and there is every probability that the largest attendance ever recorded will be equalled, if not eclipsed. A great many members in the Western Peninsula who have not attended the annual meetings for years will take advantage of the proximity of this meeting to renew old acquaintances. The meetings will take place in the Normal School buildings, which are said to be the finest of their kind in Ontario.

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## WALTER BAYNE GEIKIE, M.D., F.R.C.S., Edin., L.R.C.P., Lond.

Another of our great teachers of medicine in Canada has given up active work in his college. Dr. W. B. Geikie, the Dean of Trinity Medical College, has resigned from his positions in that institution and will confine himself for the future to consulting practice. He was well known as one of our most prominent lecturers in medicine since 1856 when he accepted a professorship in the medical department of Victoria College, Toronto, of which the late Dr. Rolph was Dean. During the next forty-seven years he filled at different times the chairs of Materia Medica, Midwifery, Anatomy, Surgery, Practice of Medicine and Clinical Medicine.

In 1871 having with Dr. Rolph resigned his position in Victoria College he and others induced the corporation of Trinity College to reorganize the medical department which had first been organized in 1850 but discontinued a few years after. Dr. Geikie was appointed Professor of Medicine and Clinical Medicine in this reorganized department which opened in October, 1871. After the death of Dr. Hodder in 1878, Dr. Geikie was elected Dean and retained this position for twenty-five years. The marvellous success of this great school of medicine during all these years was, as is well known, largely due to his great ability and untiring energy.

Dr. Geikie belongs to a family as well known in Great Britain as he is in Canada. His brother, the Rev. Cunningham Geikie, D.D., Vicar of St. Martin's-at-Palace, Norwich, England, is author of "The Life and Words of Christ," "Hours

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with the Bible," "The Holy Land and the Bible," and other works widely read. His cousins, Dr. Archibald Geikie, of London, England, and Dr. James Geikie, are very eminent geologists; the former being chief of the Geological Survey of Great Britain, and the latter Professor of Geology in the University of Edinburgh.

We offer our congratulations to Dr. Geikie upon his distinguished career as a practitioner and teacher of medicine. We rejoice that his health is good and all his faculties unimpaired, and we wish for him many long years of congenial work in his profession which he so well loves and so highly adorns.

## THE AUTOMOBILE AND PUBLIC SAFETY.

Two perils threaten us in connection with the rapid extension of the use of the automobile. The first is the danger of fire or explosion in those motor-cars driven by gasoline engines, and the second is illustrated on a scale that we hope may never be seen again by the motor-car race from Paris to Madrid last month.

The facts in regard to this race are astounding. The distance is 400 miles, the number of vehicles taking part was 228, they were despatched from the starting-point in Paris at intervals of one minute, and some of them were driven at the rate of 88 miles per hour.

Seven persons were killed before the race was stopped somewhere near Bordeaux. It is not for one moment claimed that the drivers were not careful. On the contrary, it was in endeavoring to avoid a dog that one driver caused a collision in which two persons were killed. But the dust was so great that the drivers could not see, and 88 miles an hour is a pace that kills.

The danger of explosion in connection with gasoline tanks and engines is very great, as was shown by an occurrence on 47th Street near Third Avenue, New York City, on May 21st, 1903. The driver in charge was taking Mr. T. D. Hewitt's automobile to a repair shop when he found it was on fire and gave the alarm. The firemen were promptly on hand, but no sooner was the water turned on than the gasoline tank

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exploded, severely burning twenty or thirty persons in the crowd of bystanders and passers-by. Fortunately, owing to the fact that the firemen extinguished the burning clothes of these people with rubber coats, etc., none were fatally injured, but about a dozen had to be taken to the neighboring hospitals.

The same thing happened recently to a New York physician's automobile. He had just stepped out of it at his office door when it suddenly exploded, sending some fragments 100 feet and breaking several windows.

Gasoline stoves are also most dangerous. A Toronto lady lost her life last summer near Gananoque, as a consequence of severe burns caused by her gasoline stove exploding.

We hope our city and Provincial Governments are alive to these dangers and will do something to regulate automobiles and the use of gasoline generally before any more lives are lost in this way.

## CORONER OF THE CITY OF TORONTO.

The Act respecting Coroners was amended at the recent session of the legislature, and under the Act so amended, Dr. A. J. Johnston, who was appointed a Coroner in 1875, was chosen by the Government to fill the position of Coroner of the City of Toronto. The powers and duties of the Coroner of the City of Toronto, and of all Associate Coroners in the city, shall be defined by and shall be exercised subject to such regulations as may from time to time be made by the Lieutenant-Governor in Council. The action of the government in this respect is to be commended, and will, we trust, eventuate in the doing away with the unseemly tactics displayed by some of the advertising loving and vainly ambitious younger appointees to this old and honorable position of "Crowner." The following is from Bill No. 176, which passed its third reading, June 12th:

Section 1 of the Act respecting coroners is amended by adding thereto the following subsections:

"The Lieutenant-Governor may from time to time appoint a coroner, to be designated 'the Coroner for the City of Toronto,' and from and after such appointment all coroners or

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associate coroners theretofore or thereafter appointed in and for the County of York shall as to the City of Toronto have and exercise within the City of Toronto the powers only of associate coroners for the said city, but this shall not limit the power of the Lieutenant-Governor to make further appointments of associate coroners for the City of Toronto from time to time. The powers and duties of the Coroner of the City of Toronto appointed under this sub-section, and of all associate coroners in the said city respectively, shall be defined by and shall be exercised subject to such regulations as may from time to time be made by the Lieutenant-Governor in Council.

"Whenever the death of any person appears to have been caused by an accident occurring upon a street or highway in the City of Toronto in the operation of any railway or street railway or electric railway on or across any street or highway the Crown Attorney for the County of York shall direct the coroner or one of the associate coroners in the said city to hold an inquest upon the body of the person so dying, and the coroner or associate coroner to whom such direction is given shall issue his warrant and hold an inquest accordingly.

"Section 4 of this Act shall not apply to or be in force as to inquests in the City of Toronto under the foregoing provisions of this Act, nor as to investigations held in the City of Toronto under section 6 of this Act.

"The Coroner for the City of Toronto shall be paid such salary, not exceeding $1,500, as may be fixed by Order in Council and the same shall be paid by the city half-yearly and shall be in lieu of all fees which would otherwise be payable to him and the city shall be entitled to be reimbursed out of the Consolidated Revenue Fund as to one-half the amount of such salary.

"Any coroner within whose jurisdiction the body of a person is lying upon whose death an inquest ought to be held may hold the inquest." (See Imperial Coroner's Act, 1867, s. 7).

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## RESULTS OF EXAMINATIONS.

### Queen's University, Kingston.

House Surgeons—W. S. Murphy, Portland; A. H. Leonard, Kingston; J. H. Laidlaw, B.A., Georgetown; F. M. Bell, Kingston: G. H. Ward, Napanee.

Medal in Surgery—A. H. Leonard, Kingston. Medal in Medicine—W. S. Murphy, Portland. Dean Fowler Scholarship—W. Gibson, Amherst Island. Dr. McCabe's Prize, Junior Pathology—A. H. Singleton, Newboro'. Dr. Hyunger's Prize in Materia Medica, Therapeutics, and Pharmacy—A. H. Spooner, B.A., Latimer. Faculty Prize for Best Examination in Anatomy, Physiology, and Chemistry—A. C. Spooner, B.A., Latimer, and H. A. Boyce, Murray.

M.D., C.M.—S. W. Arthur, B.A., Inverary; W. H. Aykroyd, Railton; F. M. Bell, Kingston; J. H. Cryan, Demorestville; J. S. Dickey, North Williamsburg; F. J. Ellis, Ellisville; T. B. Faley, Charlottetown, P.E.I.; H. A. Gibson, Kingston; D. H. Houston, Belleville; O. A. Igoe, Tarrytown, N.Y.; W. J. Knox, Beechburg; J. H. Laidlaw, B.A., Georgetown; A. H. Leonard, Kingston; R. H. McKerras, Kingston; A. E. MacMillan, Sydenham; H. M. Moore, Athens; W. S. Murphy, B.A., Portland; L. E. Mylks, Kingston; A. McCabe, Gloucester, Mass.; J. E. McCambridge, Kingston; D. M. McCarthy, Kingston; J. J. McDonell, St. Andrews West; J. L. McDowall, Kingston; C. G. McGreer, B.A., Napanee; W. W. McKinley, Seeley's Bay; W. L. Pannell, Kingston; J. A. Pritchard, Brockville; G. M. Reid, Kingston; J. J. Robertson, Montreal; E. Sheffield, Peterborough; W. T. Shiriff, Fitzroy Harbor; A. A. Staley, Wolfe Island; G. H. Ward, Napanee; J. A. Wellwood, Fordyce; W. Workman, Kingston; G. E. McIntosh, Kingston; B. Haskin, Green Bush; C. A. Symmes, Aylmer, Que.; F. A. Aylesworth, Bath.

### Ontario Graduates at McGill.

Ninety-six of the students in the final year of the faculty of medicine, McGill University, have passed for the degree M.D., C.M. The pass list includes the following students from Ontario: A. W. Allison, Renfrew; G. A. Bishop, Kinburn; L. C. Bishop, Marbleton; J. H. Boulter, Picton; O. Boyd, Russell; W. G. Campbell, Brantford; H. B. Chamberlain, Perth; L. V. Croft, Middleville; A. J. Dickson. Goderich; R. D. Forbes, Stratford; C. R. Gilmour, Brockville; A. L. Lynch, Britannia Bay; J. M. McCulloch, Durham; C. A. McDiarmid, Kemptville; J. W. McEachran, Rockland; D. W. McKechnie, Dundas; J. A. McIntosh, Vankleek Hill; D. D. McLaren, Felton; Thos. McPherson, Stratford; C. F. Magee, North Gore; A. G. Memdl,

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Mattawa; H. B. Munroe, Almonte; H. G. Munroe, St. Elmo; J. H. Munro, Maxwell; J. S. Nelson, City View; G. R. Peterson, Tay's Hill; W. H. Secord, Brantford; A. Wilson, Russell.

## Trinity University.

Gold Medal—B. F. O'Reilly. Siver Medal—E. C. Beer. Certificates of Honor—H. E. Eaglesham, B. F. Cousler, W. T. Gemmell, M. J. Perkins, A. G. Thompson.

Class I.—G. E. Chapman and C. H. Hair (equal), G. B. Campbell, A. W. Canfield, B. H. Hamilton, J. M. Baldwin, T. J. C. Tindle, R. A. M. Cook and C. C. Cragg (equal).

Class II.—J. H. Kidd, J. P. Cade, R. S. Conboy, R. E. Loucks, E. V. Smith, W. C. Arnold, F. R. Fursey, A. H. Campbell, W. W. Milburn, W. E. Mason, C. E. Duggan, D. Munro, A. C. C. Johnston, L. S. Pritchard, R. A. Fraser, C. B. Stone, J. A. Anderson, W. A. Lawrence, H. W. Coulter, G. F. R. Richardson, E. C. Dixon, F. W. Hill, B. D. Munro, A. H. Cook, F. J. Dodd.

Class III.—Miss E. F. Lucas, C. R. Learn, J. W. Rowntree, H. F. W. Vernon, P. W. Fuller, E. T. Cavan, A. W. Hicks, Miss O. M. Rae, W. E. Ekins, Miss M. G. Bryson, Miss L. M. Patterson.

Conditioned: In Pathology and Therapeutics—J. A. Allen.

In Therapeutics—F. M. Crosby, G. O. Ireland.

In Midwifery, Gynecology and Pathology—W. E. McLean.

In Applied Anatomy—A. E. Whitmore.

## Toronto University.

*M.D.*—Thomas McCrae, B.A., 1891; M.B., 1895.

*M.B.*—Daniel Archibald Sinclair, M.A., 1900; Claud Wesley Freeman, B.A., 1896; William Abraham Groves, B.A., 1899; John Rowland Parry, B.A., 1899; George William Ross, B.A., 1899; Thomas Willoughby Walker, B.A., 1899; George Arthur Winters, B.A., 1899; Elgin Angus Gray, B.A., 1900; Edmund Murton Walker, B.A., 1900.

*M.B. with Honors.*—John Allan Oille, George Ewart Wilson, John Phillips, Frank C. Neal, William Edward Gallie, Wilmot Alvin Graham, James Lyons Biggar, John D. Leeson, Norman Duncan Buchanan, Charles Edward Kinster.

*M.B.*—Peter Anderson, Albert Thomas Bond, Richard Sheldrick Brewster, John Vassie Brown, Thomas Arthur Carson, Kirk Colbeck, Charles Lawrence Constantinides, Ernest Keys Cullen, Jos. Eugene Napoleon De Haitre, Thomas Bickerton Edmison, John Ferguson, Robert Ovens Fisher, John Gerald Fitzgerald, Edwin James Foster, Robert Franklin Foster, Ernest Victor Frederick, George Ethelbert Greenway, James

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Henry Hamilton, Eugene Alex. Patrick Hardy, Emerson Leroy Hodgins, Kingsley Hulme Holmes, Mildred Jean Hoyles, John Garnet Wollsely Hunt, W. Beauchamp Seymour Hunt, Robert Ingram, Heber Carss Jameson, David Scott Johnston, Daniel Paul Kappele, William John Kerfoot, Dougall MacDougall King, George Franklin Lamb, Major Henry Langs, Fred Large, William Richmond Mahood, William Norman Meldrum, Thomas H. McColl, Peter Francis McCue, Archibald McInnis, William T. Morris MacKinnon, Robert Patrick McLaughlin, Hector McLean, Hugh Clayton McLean, Norman Keachie MacLeod, William McTavish, James Melvin Park, Arthur Douglas Proctor, Peter Francis Quinlan, John Morrow Robb, Frederick Alexander Ross, Victor Ross; Arthur Alex. Johnston Simpson, Solomon Singer, Wallace Eugene Somers, Norman Henry Sutton, Daniel James Sweeney. Harry Mansfield Torrington, Walter Scott Turnbull, Bert Weir, Thomas Dunlop White, Ward Alvin Willson Woolner, Suat Chwan Yin.

## SURGICAL HINTS.

Milk of assafetida, in doses of four to six ounces, forms an excellent rectal injection in cases of tympanites occurring after intra-abdominal operations.

Support by means of a well-fitting bandage of felt is always permissible, and often advisable after any abdominal wound, but pressure upon a recent cicatrix by means of a hard pad must always be avoided.

Resection of the omentum is a procedure which seldom seems to give rise to additional shock, and which is easy to perform. Hence it is always best to resect protruding omentum if it is much in the way, or if it is soiled, or much congested, or simply difficult to reduce.

If cutting instruments are to be boiled, it is always best to continue the boiling for not over three or four minutes, as it blunts the instruments badly. A preferable way of disinfecting them is to wash them well with soap and water, place them in pure carbolic acid for ten or or fifteen minutes, remove them with forceps and place them in alcohol.

After using some of the more complicated instruments which it may be impossible to dry very thoroughly after they are washed, they may be dipped in alcohol, which will absorb the remaining water, or they may be placed in an oven for a few minutes. The latter method is probably the better of the two. —*International Journal of Surgery.*



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# Personals.

Dr. E. L. Connelly has decided to locate in Collingwood.

Dr. Hershey has been appointed quarantine officer at Owen Sound.

Dr. C. F. Smith, of St. Mary's, has been appointed Coroner for South Perth.

Dr. Brefney O'Reilly (Trin. '03), left Toronto, June 19th, and sailed, June 20th, for England.

Dr. Charles O'Reilly left Toronto for Montreal, June 18th, and sailed on the *Tunisian* as far as Quebec.

Dr. Samuel E. Flemming (Tor. '95), of Sault Ste. Marie, was married, June 17th, to Miss Mary Gertrude Dunkin.

Dr. T. S. Sproule of Markdale, Ont, has been elected Grand Master of the Grand Orange Lodge of British America.

Dr. C. E. B. Duncombe, of St. Thomas, has gone to London, England, to take a course in post-graduate work.

Dr. S. G. Storey, Blenheim, Ont., is in Baltimore taking a post-graduate course in surgery at Johns Hopkins University.

Dr. A. D. McLaren, formerly of Petrolea, has been appointed County physician in Port Huron to succeed Dr. Mills, resigned.

Dr. E. C. Arthur of Nelson, B.C., has been elected Grand Master of the Grand Lodge of the I. O. O. F. in British Columbia.

Dr. Henry C. Wales, who has had charge of the practice of the late Dr. Bridgeland during the latter's illness, has decided to remain in Bracebridge.

Dr. Edmund G. Weir, late house surgeon at the Toronto General Hospital, has successfully passed the examinations for the double qualifications of M.R.C.S. and L.R.C.P., London, England.

We have much pleasure in announcing that Dr. C. D. Parfitt, has recovered from his recent slight illness, although he has not yet gone back to work. He spent a portion of June on a yachting cruise with Mr. Jarvis, of Toronto, after which he returned to Gravenhurst, where he will probably spend the rest of the summer.

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Dr. T. W. Walker (Tor. '03), will practise in Ridgetown, near Chatham.

Dr. King Smith, of Toronto, sailed from New York for England, June 27th.

Dr. Fred Grasett, of Toronto, sailed for England on the *Ionian*, June 20th.

Dr. Lorenz, the famous Austrian surgeon, visited Montreal, Ottawa and Quebec, June 20th to 24th.

Dr. James H. Richardson, of Toronto, is much in evidence in bowling on the green matches this summer.

Dr. K. H. Holmes (Tor. '03), will go to Johns Hopkins Hospital for post-graduate work in September.

Drs. F. C. Neal, N. D. Buchanan, S. C. Yin, E. A. Gray, C. E. Kinston and Greenway (all Tor. '03), expect to go to England in August.

Dr. Marshall E. Gillrie (Tor. '88), of Hamilton, received a severe injury to his right leg on Toronto Island, June 20th, from which he is now slowly recovering.

Dr. J. Algernon Temple has been elected Dean of Trinity Medical College, and also representative of the College in the Ontario Medical Council in place of Dr. W. B. Geikie, resigned.

Much regret was expressed respecting Dr. Harold Parsons' decision to retire from the secretaryship of the Ontario Medical Association after a faithful service of five years.

Dr. Lusk, who acted last year as Assistant Secretary, was unanimously elected to the position. It is no simple matter to fill Parsons' place, but Lusk's many friends think he will *fill the bill.*

Dr. James F. W. Ross entertained a large party composed of members of the Ontario Medical Association on the steam yacht *Cleopatra* on the afternoon of June 17th. Those present enjoyed the sail very much.

Dr. Thomas S. Cullen, after his return to Baltimore, wrote to friends in Toronto saying that he enjoyed himself immensely at the Ontario meeting, and appreciated greatly what the Association did for him.

Dr. Charles Lang, of Granton, who has been pursuing advanced studies in Great Britain, has been admitted, by examination, to the membership of the Royal College of Surgeons, England. Some time ago he received the diploma of the Royal College of Physicians, London.

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# Book Reviews.

**Progressive Medicine.** Fifth annual series. Volume II., June, 1903. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth, 427 pages, with 46 illustrations. Per volume, $2.50, by express prepaid. Per annum, in four cloth-bound volumes, $10.00. Lea Brothers & Co., Publishers, Philadelphia and New York.

A glance through this volume will suffice to show the reader the fatuity of attempting to keep up with the progress of scientific medicine unless he can avail himself of such a work. The enormous amount of material which it contains is the more astonishing when it is realized that it represents only what is of real, recognized scientific and practical value in current medical literature, and not simply a mass of abstracts of articles which have appeared in magazines. Each of the contributions possesses features which render it especially valuable to every medical man. The timeliness of the article by Dr. William B. Coley, on the "Surgery of the Abdomen," including "Hernia," cannot be overestimated. The vast importance which attaches to the proper diagnosis and treatment of diseases of the pancreas and liver, especially in view of the recently perfected operative measures for their relief, has only of late been fully realized, and many obscure digestive disorders, which have hitherto been regarded as of gastric or intestinal origin, are now ascribed to diseases of the pancreas or its ducts; and many diseases of the liver and gall, bladder and ducts, which have hitherto been considered as practically fatal in their outcome, are known to yield readily to operative interference.

Dr. Clark begins the section on Gynecology with a thorough discussion of all the various phases of cancer of the uterus—its etiology, clinical manifestation and treatment. Among the interesting points discussed is the relation of the diseases of the vermiform appendix to pathological conditions of other abdominal or pelvic organs.

Dr. Stengel's section on diseases of the blood includes also morbid conditions of the ductless glands and disorders of metabolism. As of especial interest, we would call attention to the discussion of the effect of various poisons upon the constitution of the blood, and of the changes of the blood in infectious diseases.

The section of Ophthalmology, edited by Dr. Edward Jackson, is, as usual, noteworthy for the practical value which it possesses, not only for the ophthalmologist, but for every physician.

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**Practical Details of Cataract Extraction.** By MAJOR H. HERBERT, F.R.C.S. (Eng.). Professor of Ophthalmic Medicine and Surgery, Grant Medical College; in charge of the Sir Cowasjee JeLanqui Ophthalmic Hospital. Bombay and London: Bailliere, Tindal & Cox. Toronto: J. A. Carveth & Co. Price, $1.25.

Nothing but praise is due to this little volume. The author has had great experience in the extraction of cataracts. He is evidently a keen observer, a most careful chronicler of that experience, and possesses sound judgment in sifting out and placing on record the more important results of the vast amount of work he has done. True, some of his conclusions would be questioned by some operators, but the book has yet to be written which commands universal assent. The present work is, however, a safe guide to go by, and it contains a mass of practical details not to be found in many of the larger works. The scope of the book may be judged by a list of its contents, which are arranged in five chapters: I. Operable Cataract; II. Description of the Operation; III. Discussion of Operative Technique and of Alternative Procedures; IV. After Complications; V. Complicated and Soft Cataracts. No ophthalmologist will wish to be without this book. It should be in every library. J. T. D.

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At the recent American Congress of Tuberculosis, held in New York, Dr. E. J. Barrick, of Toronto, was elected President, and Dr. P. H. Bryce, first Vice-President. Next year's Congress will be held in St. Louis.

The Board of the Winnipeg General Hospital have offered to raise fifty thousand dollars for new buildings if the city will contribute $25,000. The provincial government has promised $25,000. The increase of population is overtaxing the hospital.

Dr. Alexander Stark Ogg (Tor. '78), has practised in Sydney, Australia, almost continuously since he graduated. Early in June he visited Canada and stopped in Toronto a few days. He then went to his old home in Dundas, where he remained a couple of weeks. He will return to Australia early in July.

Dr. Herman, the well known obstetrician of London, England, has retired from the position of Senior Obstetric Physician of the London Hospital, after a service of twenty-seven years. He was entertained at dinner by his old resident accouch eurs June 8th.

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## "SUMMER" DIARRHEA IN INFANTS AND CHILDREN.

In Dr. A. Jacobi's standard work on "Therapeutics of Infancy and Childhood," the author makes the following statement:

"In acute cases of Intestinal (or gastro-intestinal) catarrh with high temperature, application of water, of from 60 to 70 degrees F., to the abdomen will render good service. The cloth must be wrung out thoroughly, covered with rubber cloth and flannel, and changed when warm. Anæmic children and those with much pain require warm or hot applications, which may be preceded by a warm bath. Frequent injections of water of 100 F. or more, with or without an antifermentative, such as thymol (1:1000 or 2000) answer well in most cases.

In great debility or collapse the water ought to be from 105 to 112 F., and contain some alcohol and opium, or teaspoonful of the tincture of musk. The addition of gum-arabic to the injection, or the use of glutinous decoctions (flaxseed) instead of water has a satisfactory influence. Starch injections have the advantage of adding to the nutrition of the body by the facility with which the colon changes amylum into dextrin, which will be absorbed. Part of the injected water will always be absorbed, fill the blood-vessels, and may prevent intracranial and other thromboses. Indeed, in many bad cases in which the cerebral symptoms of the so-called hyrencephaloid condition have made their appearance, or are imminent, frequent injections into the rectum of a few ounces of warm fluid contribute considerably to the restoration of circulation."

The above is quoted chiefly to show the high value that is placed upon enteroclysis in the treatment of diarrhea in infants and children by such an eminent authority as Dr. Jacobi. The importance of washing out the lower bowel cannot be too strongly impressed upon the general practitioner.

In a communication recently received from E. J. Melville, M.D., of Bakersfield, Vt, he states:

"The season is fast approaching when the wide-awake physician must look up his weapons of defence against the intestinal diseases of childhood. Shall we give digestives when the mucous membrane of the stomach and bowels is inflamed and incapable of retaining any nourishment to digest; or shall astringents be exhibited when to lock up the secretions would be but to add fuel to the flame? Should we risk the danger of opium poisoning in order to temporarily relieve some of the most distressing symptoms or to allay the anxiety of anxious parents? No doubt cases occur when some one or or all of the above mentioned remedies are imperatively indicated, but the

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majority of the patients will recover if strict attention is given to diet and hygiene, and a mild antiseptic used to sterilize the *prima via*. For the past two years I have followed a plan of treatment in these cases which has proved very satisfactory. After due care has been given to cleanliness, fresh air, sunlight and a suitable diet or lack of diet, Glyco-Thymoline is given by mouth and rectum. This preparation has been chosen for the following reasons:

1. It is pleasant to take and thus easily administered to children. 2. Although a mild antiseptic, it has shown no poisonous effect, even when a large quantity has been absorbed. 3. It is the best of good tonics and favors osmosis from diseased surfaces, thus lessening inflammation and promoting healthy granulation in cases where an ulcerative process has begun. 4. On account of the oily consistency of Glyco-Thymoline, it remains in contact with the mucous membrane for a considerable length of time, thus acting in double capacity of a protective and an absorbent. This latter quality is easily explained by the strong affinity of Glyco-Thymoline for the products of inflammation. The following cases may be of interest to the profession:

CASE 1.—Was called to see Mary P——, aged 8, on July 4th, 1900. Family history tubercular. Pulse, 102; temperature, 100 F. Diarrhea, vomiting, pain, tenderness and tumofaction over small intestines. Dilatation of pupils, loss of appetite, flesh and strength. Night sweats. Other organs healthy. History of recurring attacks every twe months for past three years. Gave Glyco-Thymoline, one drachm to four ounces of water every four hours, and high rectal injections in knee-chest position of one ounce of Glyco-Thymoline in a quart of warm water every eight hours, having the patient retain as much as possible. Diarrhea and vomiting controlled in 36 hours. Convalescence uneventful. Continued Glyco-Thymoline in thirty minim doses three times a day for three weeks, when further medication was considered unnecessary. Prescribed an easily assimilated diet, rest in the open air, and cool sponging of abdomen daily. No return of symptoms to date, May 28th, 1902.

CASE 2.—Saw G. H. F.——, aged 3 months, on August 3rd, 1901. Cholera infantum. Pulse, 170; temperature, 105; respiration, 44. Vomiting and purging of blood and mucus. Tenesmus of rectum. Symptoms of collapse. Ordered hot saline baths, followed by a brisk alcohol rub every two hours. Discontinued all food for thirty-six hours. Gave hypodermics of brandy, thirty minims, every three hours, and twenty minims of Glyco-Thymoline in one drachm of water at the same time. High rectal enemas of one ounce of Glyco-Thymoline to a pint

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of hot water three times daily. Vomiting controlled in forty-eight hours and diarrhea much lessened. Gave twenty minims of Glyco-Thymoline in four ounces of broth every four hours, which was retained, and continued rectal injections for five days, when all untoward symptoms had disappeared. Uneventful recovery.

CASE 3.—Was hurriedly summoned on Sept. 8th, 1900, to Maggie G —, aged four years, who was having convulsions. Temperature per rectum, 107 F; pulse, 135; respiration, 49. Purging of greenish colored fluid. Stools numbered thirty in past 24 hours. Hot mustard bath, followed by a brisk alcohol rub. Mustard to extremities. Glyco-Thymoline, four ounces to three quarts of water as hot as could be borne by rectal injection, allowing the fluid to flow out alongside of nozzle and injecting it slowly. This was repeated every four hours. On the following day the child's temperature was 104; pulse, 138; respiration, 48. No convulsions in past 24 hours. Gave thirty minims of Glyco-Thymoline in two drachms of water by the mouth every three hours. Temperature now began to fall rapidly and was accompanied by a corresponding decline in pulse rate, respiration and number of evacuations. Child began to ask for food and was given hot beef juice, two ounces every two hours. From this time on improvement continued rapidly and in four days the patient was convalescent. Continued Glyco-Thymoline for four weeks in twenty minim doses four times a day, well diluted with cold water. At the end of that period a normal condition was established.

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**Disinfection by Dry Heat.**

Schumburg (*Zeitschrift fur Hygiene und Infectionskrankheiten*) shows that, although dry hot air is so uncertain in its action as to be unsuitable for practical disinfection, air at 100°C. will kill the most resistant non-sporing bacteria in and on clothing and other objects within an hour, if it contains from 55 to 65 per cent. relative humidity. This degree of moisture can be attained by having a vessel of water in the space where the objects are treated. Since disinfection of clothing and other objects containing anthrax and tetanus spores is very seldom needed, and since, on the other hand, the bacteria most commonly the object of disinfection (those of typhoid fever, cholera, plague, influenza, diphtheria, tuberculosis, and, probably, measles and scarlet fever, and the pus cocci) form no spores, disinfection with moist hot air will suffice in almost all cases. This method has this advantage over disinfection by steam: that articles of leather (gloves, books, riding breeches, etc.) may be exposed from six to eight hours without injury.—*American Journal of the Medical Sciences.*

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# Selections.

## Tin as a Teniacide.

Dortschewsky (*Medicinskoe Obosrenie Revue médicale de Normandie*) finds that galvanically (electrically) precipitated tin forms an excellent remedy in tenia. He has used this preparation in cachets, each containing 0.60 gramme (9 grains), giving altogether five or six cachets at intervals of a quarter of an hour, and after the last cachet three tablespoonfuls of infusion of senna or two tablespoonfuls of castor oil. It is important at the outset of the treatment thoroughly to cleanse the intestinal canal by some good mineral water; and, further, for the two or three days preceding the administration of the tin, the patients must be subjected to a diet that will afford a minimum of fecal matter. Of thirty-eight patients thus treated, the tenia was expelled the first time in twenty-six cases; in seven instances the treatment had to be repeated; but in five cases, even after repeated treatment, the tenia was not expelled.—*N. Y. Med. Jour.*

## Acute Nephritis following Mumps.

Paganelli (*Riv. Crit. d. Clin. Med.*, from Silvestrini's clinic, reports a case of mumps in a boy, aged nine years, who had never suffered from any of the exanthemata. At first the symptoms were light, the affection being limited to the right side, while at the same time a younger brother had bilateral parotitis. Two days later the patient became very ill: respirations, 44; temperature, 39.4° C; pulse, 120. Slight edema of the eyelids and of the extremities, especially of the hands and feet. Urine scanty, 0.4 per cent. albumin; in the sediment, numerous hyaline and epithelial casts and a moderate number of red and white blood corpuscles. Stained specimens from urine passed into a sterile vessel showed a moderate number of bacteria, a few bacilli coloring with Gram, but no cocci which held their color with Gram. Cultures showed only a few ordinary bacteria (mesentericus, proteus, sarcinæ and bacilli of the colon group). One rabbit inoculated with the sediment of the urine died after fifteen days of infection with a variety of the bacillus coli, while the other died after a month, of coccidiosis. After sixteen days the fever fell to normal, the edema disappeared, the urine cleared up, and the patient rapidly recovered. The relation of this attack to the parotitis, together with the absence of evidence of any other general infection, led the author to believe that the renal process was due to the specific cause of parotitis. While slight albuminuria is not infrequent during the course of parotitis, actual acute nephritis is so unusual as to justify mention of the case.—*American Journal of Medical Science.*

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**Hyoscine for the Morphine Disease.**

Dr. R. C. Rosenberger repo:ts an interesting history of a confirmed taker of morphine. The patient during eleven years had used the drug, and his regular dosage was from 30 to 60 grains a day. The immediate urgency for treatment was an acute maniacal attack. The morphine was withdrawn and $\frac{1}{100}$ grain doses of hyoscine hydrobromate administered every hour. After twenty-five days the patient made a complete recovery, and has remained free from the use of the drug for eleven months.—*Medical News.*

**Mycosis Fungoides and Its Treatment by the X-rays.**

Jamieson (*British Journal of Dermatology*) reports two new cases of this comparatively infrequent affection, in one of which quite remarkable results followed the prolonged use of the X-rays. This case began with the usual eczema-like patches, which were followed in time by tumors which ulcerated. Soon after coming under the author's care treatment with the X-rays was begun, the exposures lasting from three to five minutes, with a soft tube at a distance of four inches. This treatment resulted in a steady and continuous shrinkage of the tumors, although new lesions appeared in the parts not exposed to the rays. After sixty exposures, on as many different days, all the tumors had disappeared. Reaction sufficiently marked to require suspension of the treatment was at no time manifest. Not only did the tumors disappear, but the thickened patches were also removed, and with them the itching.—*American Journal of Medical Science.*

**The Treatment of Lupus Erythematosus.**

Hollander (*Berliner klinische Wochenschrift*) has employed the following method of treatment with very satisfactory results in the severest and most unfavorable cases of erythematous lupus: Large doses of quinine are administered internally, and at the same time the diseased areas are treated locally by applications of tincture of iodine. After having ascertained that the patient has no idiosyncrasy in regard to this drug, a half-gramme of the sulphate or hydrochlorate of quinine is given three times a day, and five to ten minutes after each dose the affected parts are thoroughly painted with iodine. This is continued for five or six days; then the treatment is suspended for an equal period of time, until the crust produced by the iodine has fallen off. If the reaction is slight the dose of the quinine is increased. The result of this treatment is either a scar-like atrophy or a complete return of the skin to the normal, the latter occurring in the recent cases. In the majority of cases about 60 grammes of quinine are necessary to complete the cure.—*American Journal of Medical Science.*

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# Miscellaneous.

### Results of Alexander's Operation.

Wieland (*Zentralblatt fur Gynäkologie*) reports thirty-two cases from the Griefswald Clinic, in which subsequent disturbances were noted in only five, such as vesical irritation, dysmenorrhea, and pain in the cicatrices. Hernia occurred in a single instance; twenty-three patients subsequently became pregnant, eleven being relieved spontaneously, one instrumentally, while seven women aborted. In seven cases (!) the ligaments were torn asunder while making traction upon them. —*American Journal of the Medical Sciences.*

### X-Raying a Mummy.

A mummy which Mr. John Brigg, M.P., presented last year to Keightley Borough Museum has been examined by means of the Roentgen rays. With the wrappings of an Egyptian mummy are frequently found scarabs or trinkets, or "passage money," which rummagers of the old tombs traffic in. In this instance the mummy, in its case, was removed into a darkened room, and the X-rays were applied from beneath. All the details of the anatomy became visible through their linen and wooden coverings, and no foreign body could be perceived. Two or three of the toes of one foot were wanting, but the rest was perfect.—*Health.*

### An Early Sign of Typhoid Fever in Children.

Typhoid fever is such a Protean disease—that is to say, it presents such a variable symptomatology in its early stages in the young—that any assistance in the matter of diagnosis is welcome. We therefore call attention to a sign discovered by Dr. Bernard, of Zichyfalva, who points out that on careful but gentle palpation of the ileo-cæcal region in children suspected to be suffering from this disease, two or three small swellings may be detected, varying in size from a filbert to that of a pigeon's egg, distributed on a line parallel to the axis of the body. These small swellings are only to be met with during the first week, and disappear in three or four days. Their exact nature has not been ascertained. They may be hypertrophied lympathic glands situated in the walls of the ileum or enlarged mesenteric glands, although the latter are less likely to become accessible to palpation, in view of their deeper situation. However this may be, the sign is one of some importance in doubtful cases, since Widal's reaction has not yet become part of the routine investigation in general practice.—*Medical Press and Circular.*

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### A Young Anatomist.

Some days ago two little fellows of seven and eight years heard older people speaking of skeletons. The seven-year-old boy listened intently to the conversation, when the elder boy, with an air of superior knowledge, said abruptly: "You don't know what a skeleton is, and I do." "So do I!" replied the younger. "I do know. I know for certain, I do!" "Well, now, what is it?" "It's bones with the people off!"—*Lippincott's for June.*

### Severe Reflex Pain.

J. H. Tilden, M.D., of Denver, in the June number of the *Chicago Medical Times*, in an article advocating the use of tampons in gynecological practice, reports, among others, a case which was characterized by severe reflex symptoms, and which had not yielded to the treatment accorded by two other practitioners. Dr. Tilden's procedure was, the introduction of a glycerine tampon and the administration of antikamnia in ten grain doses (two five-grain tablets) to relieve the pain. The tampon was removed each night at bedtime and followed with hot water injections. The patient on being discharged, remarked, that since following this treatment she could run the sewing machine without the usual pain and tired feeling.

### Eclampsia.

The most popular theory is the one of autointoxication, although direct proof is very meager. Several other theories—infection, thyroid inadequacy, and hepatic insufficiency have their advocates, while the workers on the theories of immunity and cytotoxins have attempted to find the formation of a cytotoxin from cells absorbed from the chorionic villi.

The treatment is varied according to the theory adopted by the practitioner. As the theory of intoxication is most general, measures to promote elimination are in general use. Saline catharsis, alkaline, diuretics, hydriatic diaphoretics, but especially entroclysis are the agents used for this purpose. Blood letting has a few advocates. Submammary and intravenous injections of saline solutions promise very much.

Antispasmodics for the control of an attack are generally recommended. Of these veratrum viride and nitroglycerine receive the highest praise; but choral and morphine are used by many practitioners. Chloroform is considered a dangerous agent, but it is the most powerful of all, and occasionally must be resorted to.

The treatment by the administration of thyroid extract as recommended by Dr. Nicholson has, as yet, received no confirmation.—*St. Louis Courier of Medicine.*

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**Pertussis.**

Swoboda reports ten cases of pertussis in children treated with aristochinin, in daily doses of under 5 grains for infants under one year, and, in children, never over 15 grains a day. As a rule, nine days suffice for the treatment, large doses being given for three days, half doses for the next six days. It is well borne, produces no secondary symptoms, and causes rapid improvement and recovery.—*Philadelphia Medical Journal.*

**Queer Reasoning.**

The fundamentals of the woollen underwear theory are stated as follows: 1. Animal wool is a material provided by nature for the clothing of an animal body. 2. Man, therefore, can be clothed naturally and properly only in animal wool.

The tremendousness of the above reasoning is sublime, and can be supplemented as follows: 1. Grass is a material provided by nature for the nourishment of an animal body. 2. Man, therefore, can be nourished naturally or properly only by grass; or, further, 1. A sheep is the only animal wearing wool on its skin. 2. Man, therefore, who wears wool on his skin is a sheep.

**The Danger of Corrosive Sublimate Solution as a Vaginal Douche.**

It is strange that at the present time many medical men are found who continue to use corrosive solution for purposes of post-partum douching in spite of the clear demonstrations that have been made of its unsuitability and of its dangers, and in spite of the introduction of many safe and efficient substitutes. The use of this dangerous poison for post-partum douching is not alone confined to general practitioners, but it is used and recommended by many competent specialists. Of couse, an antiseptic cannot be condemned because it is carelessly used with fatal consequences in a single case, and, if corrosive sublimate had anything to very strongly recommend it, it would be foolish to do so, but what are its recommendations? It destroys metal instruments; it is a most dangerous lotion to leave about a house; it is decomposed and rendered useless in the presence of much albumen; it roughens the hands of the operator, and constringes the mucous membrane of the vagina and vulva, and so tends to encourage the occurrence of lacerations of these parts; and, as the case to which we have called attention shows, and as many other reported cases show, its use is by no means free from danger. The obstetrician who uses it himself is courageous, but the obstetrician who recommends it for general use to others—nurses or students—is foolhardy.—*Medical Press and Circular.*

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, AUGUST, 1903. NO. 8

## Original Communications.

### THE SURGICAL TREATMENT OF GENERAL PURULENT PERITONITIS.*

By DR. J. F. W. ROSS.
Professor of Gynecology, Toronto University.

Many years ago a Mr. Bates, of Sudbury, England, drew the attention of the medical profession to the use of large and frequently repeated doses of opium and the rigid adherence to the horizontal position in the treatment of acute general peritonitis. In a pamphlet issued he related, in an unpretending manner, a number of cases of this disease treated as above mentioned. This pamphlet was subsequently brought to the attention of Dr. Watson, the writer of a celebrated work on Medicine, published about the year 1848.

The principle adopted by Bates was that of keeping the intestines at rest. In discussing the treatment of acute peritonitis Watson says that he himself used the two grand remedies for inflammation, namely, blood-letting and mercury, and further, that these remedies were especially beneficial in treating the adhesive inflammation of serous membranes. He also believed that the abdomen should be covered with leeches for the topical extraction of blood.

The schools were then, as now, divided as to the desirability of administering purgatives in the treatment of peritonitis. The opium treatment of Bates was then brought prominently before the profession by Dr. Alonzo Clark, who died in 1887, in New York City, aged eighty-one years. For fifty years he had been actively engaged in the practice of his profession. Graduating from the College of Physicians and Surgeons of New York, he was soon appointed Professor of Pathology in the Vermont Medical College, and subsequently became Professor of Physiology and Pathology in the New York College of Physicians and Surgeons. He never attempted surgical

*Read at Meeting of Ontario Medical Association, June, 1903.



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work, but was at one time the foremost pathologist on this continent. To Dr. Clarke has been given a large part of the credit for promulgating the opium treatment of peritonitis. It was said of him that if he has done nothing more than to put forward his views on this subject he would be entitled to the lasting gratitude of mankind. The dose of opium that he administered was not fixed, but depended upon the needs of each individual case, all the time bearing in mind the important fact that cases of acute peritonitis will, as a rule, bear very massive doses of this drug.

Among the most frequent causes of peritonitis is some break in the chain of continuity from the stomach to the rectum and in such cases purgatives can only do harm by causing the pouring out of more of the contents of the digestive tract into the peritoneal cavity.

After abdominal surgery had made some considerable progress it was found that numbers of patients died from post-operative peritonitis and a crusade was instituted against the use of opium in the treatment of this disease. Many surgeons were satisfied in their own minds that free evacuation of the bowels after operation within the abdomen produced rapid convalescence. From this standpoint it was argued that purgation and not obstipation was the proper treatment for peritonitis. We know now that many of these patients who were thus rapidly relieved were not suffering from true peritonitis, but from a certain amount of peritoneal irritation and congestion and they would have made an easy convalescence without the use of any drugs.

Two great advances were made, the one largely through the work of Howard Kelly, of Baltimore, and the other through the work of Prof. Mikulicz, of Breslau. In the first instance drainage of the peritoneal cavity was done away with and this source of post-operative contamination from without was removed from the surgical arena. In the second instance Prof. Mikulicz taught us how to isolate irremovable infective areas by the protective agency of intraperitoneal gauze packing.

Those of us who have been doing abdominal surgery for years now see less not only of peritonitis but of the peritoneal irritation above mentioned than we saw in times past, owing to the two changes in treatment above mentioned, and also to the fact that our aseptic technique is now more thoroughly carried out.

All abdominal operators have unfortunately seen patients in whom purgatives have been administered for the relief of post-operative peritonitis, become more and more distended with tympanitis and succumb finally to the disease without having a single free evacuation of the bowels. On the other hand, abdominal operators have seen such patients die after they have

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been freely purged. It has been stated that the results obtained by surgeons in the use of saline purgatives in the treatment of peritonitis have been startlingly brilliant. I am not so sure that this statement is correct. It is not possible to say that those who recovered after an attack of genuine post-operative peritonitis did so as a consequence of the administration of purgatives. I do not believe that the use of saline purgatives will prevent peritonitis after operation. The free movement of the bowels at an early date after the abdomen has been opened is not an indication that peritonitis has been prevented, but is rather an indicator that peritonitis does not exist, and that, as a consequence, a movement of the bowels can be easily obtained. When such a free evacuation of the bowels has been procured the surgeon's mind is relieved and the patient is much more comfortable.

I have not found opium, administered after operation, cause the harm that has been attributed to it by some. I always give sufficient opium to keep the patient from suffering severe pain in order that the vital forces may not be impaired.

In looking over a subject to present to the Toronto Medical Society I thought it would be interesting, not only to myself, but to others, to go back over my surgical experience with general purulent peritonitis. I divided all the abdominal operations performed by me into groups of 500 and in each group selected the cases of general purulent peritonitis, and made a comparative statement of the results.

| | Recov. | Deaths. | Total. |
|---|---|---|---|
| General Purulent Peritonitis, caused by— | | | |
| Perforation of appendix | 14 | 21 | 35 |
| Perforation of uterus (attempted abortion) | 0 | 2 | 2 |
| Gonorrhea | 1 | 1 | 2 |
| Ruptured pyosalpinx | 0 | 2 | 2 |
| Ruptured pus pocket (appendiceal) | 0 | 2 | 2 |
| Perforation of intestine | 1 | 0 | 1 |
| Curettage of uterus | 0 | 1 | 1 |
| Gangrene of rectum | 0 | 1 | 1 |
| Cause not made out | 0 | 1 | 1 |
| | 16 | 31 | 47 |
| Cases sponged out and drained | 0 | 1 | 1 |
| Cases sponged out and not drained | 1 | 2 | 3 |
| Cases flushed with water and drained | 3 | 27 | 30 |
| Cases flushed with water and not drained | 2 | 0 | 2 |
| Cases flushed with normal saline and drained | 6 | 1 | 7 |
| Cases flushed with normal saline and not drained | 4 | 0 | 4 |
| | 16 | 31 | 47 |
| Of the cases operated on I find— | | | |
| Natural diarrhea | 2 | 0 | 2 |
| Purgatives given | 3 | 10 | 13 |
| Opium and purgatives | 2 | 1 | 3 |
| Opium alone | 8 | 6 | 14 |
| No record of exact treatment | 1 | 14 | 15 |
| | 16 | 31 | 47 |

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Forty-seven cases of general peritonitis were operated upon, thirty-one died and sixteen recovered. I refer only to cases in which pus was distributed all over the abdominal cavity, in which the intestines were reddened and the patients were in an extremely dangerous and even desperate condition. In the first series, fifteen cases were operated on, thirteen died and two recovered, a percentage of recoveries of only thirteen. In the second series twenty-one cases were operated on, fifteen died and six recovered, a percentage of recoveries of twenty-nine. In the third series (not as yet completed) eleven cases were operated on, three died and eight recovered, a percentage of recoveries of seventy-three. The last death, I may say, occurred but recently, tending to reduce the percentage of recoveries in the last series.

In the first series the intraperitoneal wash used was plain water, and the subsequent treatment adopted was the administration of purgatives. In the second series some were washed with plain water and others were washed with normal saline solution, and in some cases purgatives were administered, and in others opium was given. In the third series the intraperitoneal wash used was normal saline solution and opium was administered in large doses whenever it was supposed to be indicated.

It is my intention to speak of the treatment adopted in the last series. The method adopted is as follows: The abdomen is opened by an incision large enough to insure rapid and thorough work. The cause of the peritonitis is, if possible, located and surgically treated, so that it is eliminated as a subsequent factor in the case. The attention is then turned to the diseased membrane, the peritoneum itself covering intestines, liver, spleen and pelvic organs. It must be remembered that in the peritoneal cavity are five distinct pouches in which septic material readily lodges, namely, the post-hepatic pouch, the post-splenic pouch, the two lumbar pouches, and the large pouch of the pelvis. Each of these is thoroughly douched in turn by a strong stream of normal saline solution heated to a temperature of about 100 degrees F. It is useless to wash the pus from one pouch without thoroughly cleansing it from the others. The instrument found most useful for reaching the different pouches is a medium-sized Tait's ovariotomy trocar of ample calibre, dull at the point, and with large lateral perforations near the end, through which the fluid is introduced into the peritoneal cavity. If this washing cannot be accomplished without partial or total removal of the intestines through the opening there is no reason why the intestines should not be lifted out. It is now believed that in prolonged operations for the resection of intestine the constant douching of the parts with a warm normal saline solution prevents shock.

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The anesthetist and the operator, during the carrying out of this procedure, for the treatment of purulent peritonitis, must not become so alarmed by the rapidity of the pulse as to stop before the work has been properly completed. It is a well-known fact that patients dying from peritonitis linger for many hours with an almost imperceptible pulse. Many of those who have very thready pulse on the completion of these manipulations will soon rally after they have been placed back in bed. The administration of the anesthetic can frequently be discontinued while the washing is being carried out, and a few whiffs may again become necessary when the sutures are being introduced.

The operator must now consider the question of drainage. Should he institute drainage or should he close without drainage? I have had results that have thoroughly satisfied me when no subsequent drainage was resorted to. If the washing is thorough, and there is no definite suppurating and pus exuding area, and it has been possible to surgically seal up the original source of the infection, it is unnecessary to use drainage in any form. But if an old abscess sac that has ruptured and has produced the peritonitis is still present and cannot be removed, drainage must be instituted, and in such cases I have combined the gauze packing to protect the recleansed peritoneal cavity and a glass or rubber drainage tube to insure removal of any excess of fluid. The gauze does not act as a good drain for any length of time, owing to the fact that its meshes become filled with granulations and organic matter.

The next point in the treatment is the administration of normal saline solution by hypodermoclysis. Three pints of normal saline solution should be injected under the breasts or elsewhere, and a hot saline injection should be thrown into the rectum as soon as possible after the abdominal wound has been closed. The patient is now placed in bed, and the administration of opium is begun and continued until the respirations have been reduced to ten or twelve per minute.

Loomis, in 1885, said that in twenty-four hours after the administration of the opium a rash may make its appearance on the skin. This rash is often accompanied by itching of the surface and a disposition to rub the nose. The pupils become contracted, the eyes become suffused, the countenance assumes a dull expression, and there is an irresistible disposition to sleep. The pulse is lessened in frequency and force, and the respirations are reduced. The patient should now be held in this state of semi-narcotism. The amount of sleep obtained is not of much importance, but the profoundness of the slumber should be noted. If it is found difficult to arouse the patient, the administration of the opium must be stopped for a time

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until he can be easily wakened. When the pulse begins to diminish in frequency and becomes fuller, we may be hopeful that the peritonitis has been controlled. Loomis gave from two to five grains of opium, or one-half to one grain of morphine at a dose. It will be noticed that, as the inflammation subsides, the patient becomes more and more susceptible to the influence of the drug, and much smaller doses will be required. Slowness of respiration and the absence of pain cannot be relied on as indications that the inflammation is controlled, but when the pulse becomes diminished in frequency, and with it the tympanitis subsides, ultimate recovery is extremely probable unless some secondary complications arise. The complications I have met with have been pneumonia, single and double, pleurisy with effusion, double parotitis, and secondary accumulations of pus in other parts. It is not wise to be over-anxious regarding the constipation that will exist, because a free, spontaneous movement of the bowels generally follows the subsidence of the inflammation.

What are the indications in the treatment of this disease? In the first place, we should remove from the peritoneal cavity the germs and the toxines produced by them; in the second place, we should introduce some material that will produce chemical change by destroying the activity of infective matters, non-irritant, and a preservative of organic matters, and something that can be absorbed into the system without being productive of harm. A solution of common salt fulfils these indications. A ½ to ¾ per cent. solution of salt causes little or no change in normal tissues with which it comes in contact and is used, as you all know, in physiological experiments and microscopy whenever it is desired to keep the tissues as nearly normal as possible. Externally applied, common salt is stimulant and rubifacient, but when diluted its irritating properties disappear. Among those antiseptics that have very little influence on animal poisons, but simply preserve organic matters from decomposition, is chloride of sodium.

Thirdly, something should be introduced into the system to minimize the poison that has been already introduced into the blood. Owing to the condition of the intestinal tract, it is almost useless to attempt to administer drugs by the stomach. More absorption is likely to take place from the lower bowel. It is therefore advisable to introduce saline solution beneath the skin and per rectum.

In cholera epidemics, salt and water has been frequently injected into the veins, and it was credited with having hastened and secured recovery. It was also given by the stomach to arrest the disease. The salt was supposed to act directly upon the cholera poison.

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Fourthly, the administration of some drug that will act either as an antidote to the poison already absorbed, or that will delay further absorption until resterilization of the fluid or greater immunity of the system has taken place, or that will act in both capacities.

Having seen a case of severe atropine poisoning, I was struck with the resemblance of the symptoms to those produced by the poison of acute general peritonitis. The face was anxious, the abdomen much distended, and the pulse rapid. Atropine poison, then, produces symptoms very similar to those of the toxines formed in acute general peritonitis. Opium is the antidote to the one, and there is no reason why it should not be the antidote to the other. Opium may then act as an antidote in this disease.

It is well known to those who have performed many abdominal operations that a process of sterilization of intraperitoneal fluids produced during the acute general peritonitis must take place, because we find large collections of sterile fluid left in the abdomen after the subsidence of such inflammation, and often retained there for many years. If this is so, we must believe that a fatal termination may be warded off by preventing the rapid absorption of intraperitoneal fluid until the process of sterilization has been partially or completely accomplished. We know that opium acts on the secreting and excreting organs, with the exception of the skin, in such a way as to lessen their activity. Opium restrains tissue change. It checks digestion in the stomach and checks secretion and movement of the intestines.

I find that in one case of poisoning by opium there were found at the autopsy patches of a milky whiteness over portions of the peritoneum without any appearance of inflammation or of peritoneal effusion. I see no reason why opium in large quantities should not assist in preventing the absorption of fluid from the peritoneal cavity. If so, it is a very valuable factor in the treatment of this disease.

And, now, let me say, in conclusion, that I believe that the abdomen should be opened for the treatment of acute general purulent peritonitis. Someone may ask, How do you know a case of acute general purulent peritonitis when you meet it? In reply, I would say that the symptoms are very definite and ought to be recognized by the modern practitioner. In the first place, we have sudden, severe pain that is soon followed by an extreme rigidity of the abdominal muscles, a tenderness on pressure, a vomiting or a tendeney to vomit, and a pinched expression of countenance that is very noticeable. The muscles are at times almost tetanic in their rigidity, so that the various bundles can be prominently made out by the wavy lines produced across the abdomen. The thermometer and the pulse

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rate give us but little, if any, assistance, and they can both be overlooked in coming to a conclusion. If we wait for an indication from either of them we will frequently be tempted to delay surgical procedure until the golden opportunity has passed by.

It has been stated that no symptom is more serious in acute peritonitis than tympanitis. I think that this is scarcely so. When tympanitis has set in the disease is far advanced and the tympanitis is an indication of that advancement. But I have seen many patients die long after the tympanitis had come and had disappeared again.

The surgical treatment in these cases should come first and the medical treatment should follow, and the order of things that has obtained for years should be changed. After the surgeon has finished his part of the work he should hand the case over to the physician in order that the physician may carry out the medical treatment to the fullest extent.

Waiting for operation until some symptoms arise that are supposed to call for operative interference means a delay that should never occur. Acute general purulent peritonitis of the type of which we are speaking has very definite symptoms presenting at an early stage.

I do not wish it to be understood that I advocate operative procedures in every case of peritonitis. I am sometimes particularly anxious to stay my hand in cases of localized peritonitis, and I may particularly mention that form that proceeds from gonorrheal infection of the pelvic organs. It is at such times more dangerous to operate than to wait. In such cases the gonorrheal virus, that is terribly poisonous, may be carried to localities in which it does not exist.

One well-known author says: "In those cases where we can discern no exciting cause which can be removed or benefited by surgical interference it is not wise to operate." The very difficulty with which we have to contend is this very discernment that is required. It is difficult to discern the exciting cause even after the abdominal cavity has been opened, and it is certainly much more difficult to discern the exciting cause when the abdominal cavity remains closed. If we adopt the advice above given, I am afraid we will be waiting for a *post mortem* examination. It is not necessary that in the presence of general peritonitis we should wait to make an accurate diagnosis as to the cause of the peritonitis.

Unfortunately, many have dabbled in abdominal surgery who were totally unfitted by previous training for such work, and, as a consequence, many of the terrors and dangers of the past that surrounded such operations are still present in the modern mind. Many seem unable to grasp the idea that the opening of the peritoneal cavity in competent and skilled hands is but

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a trivial matter. When peritonitis exists we need not fear the production of a disease that is already present, and if no peritonitis exists the mere opening of the abdomen should not produce it.

I have never lost a patient from what is called an interval operation for the removal of the appendix, nor for the relief of acute appendicitis when performed within about thirty-six hours of the invasion of the disease. Instead of endeavoring to ascertain which of the cases should be operated upon we should set ourselves the task of discovering which of the cases should not be operated upon.

I have endeavored to give you my own thoughts upon this important subject, together with the results of any little work I may have done, and you must judge of the results for yourselves.

## Appendix of Cases in Detail.

Case 1.—Mrs. P., aged 25. (Dr. Carveth.) October, 1888, confined. In February, 1889, had an attack of gonorrhea; recovered. Fourth confinement, March 4th, 1891, easy labor; good recovery. April 6th, suddenly seized with pain in umbilical region; chill; vomiting and diarrhea. At noon, April 7th, expression of face anxious; tongue, dry and brown; temperature, 102; pulse, 100. Abdomen very tender all over, but not especially so in pelvic region. Noon, April 8th, temperature, 103; pulse, 120; abdomen much swollen and tympanitic; constipated. Morning of 10th, not improved and brought to General Hospital under my care. Diagnosed gonorrheal peritonitis; general, far advanced; held out but little hope, but advised laparotomy. April 10th, 1891, at 1 p.m., at Toronto General Hospital, assisted by Dr. A. H. Wright, opened abdomen; sero-pus flowed out; bowels very red and almost gangrenous in places, covered with lymph flakes mixed with pus; no adhesions; bowels so distended that it was difficult to keep them in abdomen; appendix healthy, no obstruction found. Bowels not allowed outside as loop by loop was examined. No bile color found in fluid and thus concluded not perforation of gall-bladder. No urinous odor and no symptoms pointing to perforation of renal calculus or perforation or rupture of bladder. No fecal extravasation. Tubes and ovaries normal in size, but looked black and purple, almost gangrenous. Pelvic organs all looked very dark red and purple. Washed out with sterile water, drained. Died twenty-four hours after. A *post-mortem* found nothing to account for inflammation until ovaries and tubes were drawn up, almost purple in color with ecchymotic spots. Pus in tubes, but no gonococci. Bowels in places almost gangrenous and rotten, either from severity of inflammation or pressure by distention.

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CASE 2.—Mrs. U., aged 19. (Dr. Leslie.) Menstruation normal; severe pain right iliac region, localized for two hours, then diffused over abdomen; paroxysmal; vomited; diarrhea set in. Up out of bed and walking about; again seized with pain over abdomen; could not bear weight on abdomen; temperature, 99.3; pulse, 104; respiration, 24; up and out again, when pain recurred. Patient removed to Toronto General Hospital. Urine colored with blood, probably vaginal; a trace of albumen. Microscopical examination showed blood corpuscles and pus. Diagnosed acute general peritonitis from perforated appendix and gonorrheal infection; pulse at the time of operation, 150-160. July 10th, 1892, assisted by Dr. Wright, opened abdomen in median line; peritoneum congested, intestines almost scarlet; a semi-glutinous serum escaped; ovaries and tubes adherent and fixed; uterus bound down by adhesions; decided the trouble was from gonorrheal infection; removed tubes and ovaries, which were swollen and grayish-purple color and filled with pus; washed out thoroughly with plain water, and drained; recovered.

CASE 3.—F. M., aged 11. (Dr. Wallace.) Sudden pain in abdomen; vomiting; increase of tenderness in right iliac region; distention not marked; vomiting excessive; gas passed through intestine, showing no obstruction of bowel; pulse rapid; diagnosed appendicitis. August 18th, 1892, Toronto General Hospital, assisted by Dr. Wright, opened to the right of the rectus muscle; general purulent peritonitis found from perforated appendix; washed out thoroughly with plain water and drained; became very weak during operation; purgatives given; died.

CASE 4.—Mrs. H., aged 47. (Dr. Lowe.) Several children; been losing a great deal of blood lately at menstrual periods. On examination a tumor was found, larger on the left than on the right side, stretching across the abdomen; tumor been growing rapidly; abdomen tender to touch; has bearing-down pains and pain across back; diagnosed large fibroid tumor extending to umbilicus; advised hysterectomy. While awaiting hysterectomy, patient was taken with sudden severe pain low down on left side of abdomen; temperature and pulse elevated; three days later looked much worse. September 1st, 1892, at Toronto General Hospital, assisted by Dr. Wright, opened abdomen in median line; general peritonitis from rupture of pus tube on left side; removed fibroid as well as the ruptured tube; sponged out; closed; patient died.

CASE 5.—Mr. T., aged 24. (Dr. J. M. Cotton.) Wakened with pain in abdomen; ate his breakfast and vomited it; rode to town, but owing to severe pain, was forced to return; became easier after getting an opiate. Forty-eight hours after pain returned more severely; rigidity of the abdomen, distention;

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pulse, 135 ; bathed in perspiration ; commencing collapse. On November 14th, 1892, in kitchen of patient's house, assisted by Dr. Cotton, while neighboring man held lamp, opened abdomen to right of right rectus; came on a pus pocket containing very offensive pus; pus pocket evidently ruptured into general peritoneal cavity. Washed out with plain water; placed gauze drain ; purgatives given ; died.

CASE 6.—Rev. M, aged 65. (Dr. Harris.) Severe pain in abdomen; went around two days ; went out, preached ; pain intense ; vomiting set in ; pain localized, right iliac region ; rigidity of right rectus ; induration ; bowels moved several times; distention came on, very tympanitic ; vomiting continued ; acute general peritonitis diagnosed ; mass to be felt on right side through rectum ; pulse, 112 ; temperature, 102 ; four-headed consultation, difference of opinion. Operation deferred, as some supposed simple obstruction of fecal accumulation, which could be removed by purgatives ; bowels freely moved, still difficulty remained ; pulse higher and vomiting continued ; patient much weaker ; though a week had been lost, decided to operate. At the residence, assisted by Dr. Harris, February 15th, 1893, opened to right of right rectus ; found thickened appendix ; pus oozed out from perforation in appendix. Appendix itself evidently the seat of abscess. This had ruptured into peritoneal cavity ; acute general peritonitis ; irrigated abdomen with plain water; glass drain ; purgatives administered ; patient died ten days after ; abdominal symptoms much relieved, but general systemic condition unimproved.

CASE 7.—Mr. B., aged 30. (Dr. Harrington.) Three years before patient had been operated on for strangulated hernia ; fecal fistula had resulted ; fistula then closed. Returning home in evening he ate a hearty supper consisting, among other things, of green onions. At three in the morning was wakened with pain in abdomen ; rigidity of abdominal muscles ; pain all over abdomen ; rapid pulse, 130 ; decided to operate ; patient looked collapsed. On April 30th, 1893, at Toronto General Hospital, assisted by Dr. A. H. Wright, opened abdomen in median line ; sero-purulent fluid all over abdominal cavity ; washed out with plain water, portion of green onions from among intestines ; drew out half of intestines from abdominal cavity ; searched for perforation ; could not find it ; drained ; patient almost died on the table ; slowly improved ; recovered ; stimulants only ; colliquative diarrhea ; died one year after from perforation in the same place ; no operation, second attack.

CASE 8.—Miss D., aged 32 ; took ill October 26th, 1893. Severe pain all over abdomen ; during sleep vomited ; pain became localized in left side ; temperature and pulse elevated ; improved ; got up out of bed ; taken ill again ; distention of

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abdomen. On the fifth day severe sudden pain in right iliac region; anxious expression; legs drawn up; tender spot on pressure, usual place. On October 30th, 1893, at St. Michael's Hospital, assisted by Dr. Amyot, opened abdomen; gush of pus as soon as peritoneal cavity was opened; intestines matted together in ileo-cecal region; appendix lay in pelvis; peeled out from adhesions; removed; appendix was gangrenous and perforated near the tip; abdomen thoroughly flushed with plain water; post-hepatic, post-splenic pouches, iliac fossa and cul-de-sac of Douglas being thoroughly washed; gauze and tube drainage; small quantity of opium; died.

CASE 9.—Mrs. H. (Dr. Lesslie.) Never well since labor, two months before. Diagnosed purulent peritonitis. September 16th, 1894, at small house, patient being too weak to move to hospital, assisted by Dr. Lesslie, opened abdomen in middle line. As I cut my finger, requested Dr. Lesslie to do washing out with plain water and finish operation. Large quantity of pus; drained; patient died.

CASE 10.—Mrs. McF. (Dr. Eadie.) Patient passed pen-holder into uterine cavity of uterus to produce abortion. Pain came on and taken violently ill Sunday night; ill Sunday, Monday, Tuesday. No doctor sent for until Wednesday, when Dr. Eadie found her suffering great pain; tenderness on left side of abdomen, low down; could gain no information as to cause at first. I saw patient Friday; found suffering from tenderness over whole abdomen; evidence of general peritonitis. Pulse, 120; temperature, 103; evidently very ill. Owing to cause of trouble did not care to tell husband, therefore did not care to operate then. Heard nothing until Sunday night, when I was called to operate. December 16th, 1894, at residence, opened in median line. Found large quantity of pus and large flakes of nasty-looking lymph. Washed out thoroughly with plain water; drained; largest quantity of pus in pelvis. Pulse dropped from 130 to 109; temperature to almost normal. Temperature began to rise again next afternoon, and she died the following morning, thirty-six to forty-eight hours after operation.

CASE 11.—Mr. M., aged 42. (Dr. A. H. Wright.) Taken on Tuesday with sudden pain in abdomen at umbilicus; rapidly distended and given purgatives without effect; no flatus passed at this time; vomiting. At 6 a.m., Friday, suddenly collapsed; great change in appearance; pulse not over 90, temperature about 99. Friday afternoon I saw him; found slightly jaundiced; waited while large enema was given; brought away some fecal coloration but no fecal matter. He stated a small amount of fluid passed down; had suffered with large inguinal hernia for some time; this complicated diagnosis; decided to

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wait. Saturday afternoon saw him again; large amount of flatus expelled. This pointed to appendicitis, with acute general peritonitis; pulse not over 90. Diagnosis lay between appendicitis and intestinal obstruction, in some way connected with hernia. January 19th, 1895, at patient's residence, assisted by Dr. McFarlane, opened in median line. Great difficulty in keeping intestines in place; enormously thickened omentum; gradually separated and peeled off; large quantity of sero-pus came from pelvis; intestines deeply congested; omentum covered with purulent lymph; large portion of omentum removed; appendix could not be found. Washed out with plain water and drained; closed. From appearance of patient did not think likely to live more than forty-eight hours; it seemed impossible to recover from such a condition; purgatives administered; died January 21st.

CASE 12.—Miss G. (Dr. C.) Abdomen distended, rigid; pulse about 130, temperature 103; vomited; diagnosed acute general peritonitis; decided to operate immediately. Eight days previously Dr. C. curetted interior of uterus for anteflexion; on fourth day after operation symptoms of fever, headache, increase of pulse, some tenderness in neighborhood of stomach. February 20th, 1896, at patient's residence, assisted by Dr. W., opened in median line; peritoneal cavity filled with pus and flakes of lymph; washed out with plain water; broke up all adhesions; right and left tube very much inflamed, thickened and pulpy; left ovary particularly pulpy; drained; closed; purgatives administered; died same evening.

CASE 13.—Dr. Y. About 4 a.m., Friday, taken ill with sudden, severe pain in abdomen; vomiting; was up and around, but had to go to bed; one attendant thought perhaps suffering from renal colic, other thought appendicitis; thought of sending for me Friday evening, but did not send until Saturday. I saw him Saturday at 8 p.m.; concluded perforation of appendix; advised immediate operation, but stated afraid too late. February 23rd, 1896, at 1 a.m. (Sunday), at patient's residence, assisted by Dr. C., opened on right side near Poupart's ligament; omentum coiled up, broke through folds and evacuated pus, flocculent and serous; large hole in appendix, through which could insert little finger; almost ulcerated off at cecum; so rotten, ligature tore through; removed appendix; washed out with plain water; drainage and iodoform gauze packing; foreign body found in appendix; died.

CASE 14.—Mr. D. O. R. (Dr. Youker.) Four weeks previously, while in Michigan, severe attack of what appeared to be appendicitis; lump formed and disappeared; no improvement; brought home; improved and able to be up and out Driving a couple of days previous to attack, which began at

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2 a.m., Saturday, February 20th. Sent for me Sunday and arrived on night train. Diagnosed general purulent peritonitis from secondary rupture of pus sac; operated February 22nd, 1897, 2 a.m., by lamplight, at patient's residence, assisted by Dr. Youker. As soon as peritoneum cut through, sero-purulent fluid discharged; mass of adhesions and pocket of pus; appendix removed; washed out with plain water. Adhesions of intestines not disturbed, as whole upper portion of peritoneal cavity shut off by them; pulse at operation, 120: drained with gauze and tube; closed; purgatives given; died.

CASE 15.—Miss N., aged 22. (Dr. Britton.) Grippe one year previously, ill two days; noticed lump one year ago; pain in front after urinating, voided frequently, two years ago; last week thought lost flesh. Diagnosed multilocular ovarian tumor; advised operation and arranged date; afterwards patient decided to wait. I warned her of risk; heard nothing for a few days, when the doctor called to see me. That morning she was suddenly taken ill (February 21st); afraid tumor had burst; temperature, 104; pulse, 120; evidence of peritonitis. I saw patient Wednesday; very ill; pulse, 120; distention. Thursday morning saw again; pulse, 128; more distended, evidently very desperate condition; concluded only chance in operation, and even that could scarcely save life. At 3 p.m. same day, February 25th, 1897, at residence, assisted by Dr. Britton, opened in median line. Abscess of left ovary burst; peritoneal cavity full of sero-pus; two enormous pus tubes, largest I ever saw, containing each fully one pint of pus; after great difficulty removed right; very firm adhesions; abscess of right ovary; left tube removed; both tubes burst during removal; washed out with plain water; drained; pulse began to fail towards evening, and patient died between 12 and 1 a.m.

CASE 16.—Rev. J. M. Ill four or five days; attack of appendicitis; temperature and pulse about normal; distended; vomiting; circulation poor, although pulse not above 110, and full; temperature, 99; reminded me very much of Case 11. Hopeless prognosis before operation; decided to drain right loin. March 6th, 1897, at residence, assisted by Dr. Hunter, opened on right side; walled off pus sac with very thin lymph wall that looked like yolk of egg, ready to burst; slightest touch broke it; very offensive pus; sero-pus all over abdomen; washed out with plain water; did not disturb adhesions around appendix; no sutures applied; iodoform gauze dressing in and over outside of wound, and sterilized wool. Next day saw patient; vomiting; distention increased. Doctors had punctured intestines in an endeavor to remove gas, but failed; distress from distention very great; pulse only 90,

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temperature, 99; vomited large quantities of porter-colored material during my visit; purgatives administered; died.

CASE 17.—Mrs. B. (Dr. A. J. Johnson.) Sudden pain in abdomen two weeks ago; acute general peritonitis; high fever; temperature, 105; found hardened mass right side, on level with navel, about 2½ inches in diameter, felt brawny. On examination through vagina large mass behind and below uterus, pushing it up; concluded secondary phlegmon from original appendicitis. September 10th, 1897, at St. John's Hospital, assisted by Dr. Johnson, incised in median line; purulent collection in cul-de-sac of Douglas; hard mass, proved to be appendix, perforated; two fecal concretions escaped; general peritonitis; omentum and bowel adherent; removed appendix; washed out with plain water and packed gauze through another incision; two drainage tubes; gauze through lower portion of incision; purgatives; died.

CASE 18.—W. F., aged 11. (Dr. Forfar.) Ill Tuesday with pain in abdomen after receiving a blow from a boy in play; went to school Wednesday and on Thursday until noon; pain more severe; vomited. Saturday afternoon (December 4th) saw patient; pulse, 160; no abdominal distention; rigidity of muscles; pain over McBurney's point; restless; diagnosed gangrenous appendix; ruptured at nine that morning. Opened in right iliac region; washed out with plain water; made counter opening in loin same side, drew piece of sterilized rubber drainage tube through; packed gauze over appendix and into loin; another opening in median line; packed gauze into left loin, up under stomach and down into the cul-de-sac of Douglas to establish free drainage of pus, that filled entire peritoneal cavity. Patient died 9 a.m., Sunday, December 5th, eighteen hours after operation. *Post-mortem* showed gangrenous appendix, that had evidently burst into cavity of peritoneum.

CASE 19.—B. H., aged 7. (Dr. Simpson.) Distention; all symptoms of appendicitis with peritonitis; very poor, but only chance by operation. December 18th, 1897, at residence, assisted by Dr. Simpson, opened to right of right rectus; appendix turned upward with short mesentery; adhesions; abscess sac with pus; appendix removed; washed out with plain water and drained; closed; did not improve and only lived a little over twenty-four hours; distention became greater; vomiting continued; died.

CASE 20.—T. L., aged 19. (Dr. Barton.) Taken ill Monday with slight pain in abdomen, but worked; pain continued; Tuesday, worse; vomited once. Doctor saw him Wednesday; tenderness over appendix; rigidity of right abdominal muscle; elevation of temperature, about 101; pulse, about 90.

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I saw patient Friday; no distention; rigidity; temperature, 101; pulse somewhat feeble, though not over 100; diagnosed appendicitis and advised operation at once. December 31st, 1897, at Toronto General Hospital, assisted by Dr. Barton, opened to right of median line; gangrenous appendix in pelvis; intestine very much thickened by septic infiltration; impossible to remove appendix; friable tissue; sero-pus general; washed out with plain water; packed with gauze; drained through open wound; pulse, 160 on table; opium and purgatives given; recovered.

CASE 21.—T. D., aged 9. (Drs. McLean and Gilchrist.) Taken ill February 7th; pain in abdomen; appeared to be improving; Thursday, severe pain, much worse; distention; pulse not elevated. I saw patient Tuesday evening (15th); distention; circulation poor; slow respiration; pulse about 80 to 100; looking very ill; dark rings under eyes; concluded abdomen full of pus; on percussion, dulness in each flank; advised operation, but slight hope of recovery. February 15th, 1898, at Orillia, assisted by Dr. McLean, opened along right rectus; pus free in abdominal cavity; horribly offensive; made second opening to left of rectus muscle; washed thoroughly with plain water; appendix hanging in pelvis, perforated at tip; removed. Two drainage tubes inserted; pulse about as good as before operation, but slight hope held out; died.

CASE 22.—T. C. (Drs. Eadie and McMahon.) Vomiting for about one week; evidence of peritonitis. March 26th, 1898, at St. Michael's Hospital, assisted by Dr. McKeown, opened in median line; peritoneal cavity full of pus; appendix healthy; no perforation; sigmoid flexure thickened; mesentery, black gelatinous material that looked gangrenous; appendices epiploica of rectum were gelatinous, inflamed, black patches; evidently case of gangrene of mesentery of rectum with peritonitis; could not do anything; closed; died March 31st.

CASE 23.—Miss C. (Dr. Cleland.) Took ill May 10th, with sudden pain in abdomen; managed to get home, but suffered great pain on way; severe vomiting. Dr. Cleland found tenderness above navel across abdomen; tenderness in right loin, also over appendix; temperature slightly elevated in two or three days. Pulse gradually increased, when I saw patient it was 120; distention of abdomen increased; advised operation; concluded appendix high up in abdomen and back in loin. May 17th, 1898, at Toronto General Hospital, assisted by Dr. Cleland, opened abdomen; gangrenous, thickened appendix, tip upwards near liver, filling posterior part of loin; abscess cavity opened; removed appendix from adhesions

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with great difficulty. Washed out with plain water and drained; opium and purgatives administered; died.

CASE 24.—H. H. (Dr. Walters.) About a week or ten days before complained of sudden acute pain in abdomen. One doctor thought colic, another intussusception, another typhoid fever; no elevation of pulse when I saw him; all thought it impossible to be appendicitis in this condition. I said the worst cases were those in which there was no elevation of temperature or pulse, and I thought abdomen full of pus. July 4th, 1898, at private residence, assisted by Dr. Macdonald, opened in median line; very severe inflammation of peritoneum; adhesions; abscess cavity extended high up into left loin beneath spleen; concluded hopeless, but removed appendix; closed three holes in cecum and washed out both cavities with plain water; drained; died.

CASE 25.—F. R. W., aged 23. (Dr. Cuthbertson.) Pinched appearance of countenance; temperature, 98.2; pulse, 120. July 18th, 1898, at Grace Hospital, assisted by Dr. Cuthbertson, opened hurriedly, owing to patient's condition; abscess and gangrenous appendix at bottom of it in right iliac region; did not disturb adhesions; general purulent peritonitis present. Washed out with plain water, packed with gauze and left wound open; died.

CASE 26.—Mrs. M. (Dr. Eakins.) Saw patient in consultation; distention; temperature, 102; pulse, 120. Ill about ten days; was vomiting. Diagnosed peritonitis and appendicitis; advised operation, although held out but little hope. September 2nd, 1898, at private residence, assisted by Dr. Eakins, opened in right ilium semilunaris; found appendix dipping into abscess sac; pus; appendix ulcerated off; large rent at lower end of cecum stitched; did not disturb adhesions; washed out with plain water and drained; pulse went to 156 on table; temperature gradually rose all day after operation, as well as pulse; no vomiting; nourishment good; slept well with ¼ gr. of morphia. September 3rd, at 9 p.m., pulse, 150; temperature, 105.2; died at 2 a.m. on the 4th.

CASE 27.—Mr. E. (Dr. White.) Taken ill Friday; on Saturday severe pain; saw doctor. Doctor came to see him on Sunday when in bed; telephoned me Monday night; arrived Tuesday morning, but evidently too late to be of service. October 4th, 1898, at private residence, assisted by Dr. White, opened above Poupart's ligament on right side; peritoneal cavity full of pus; not distended; appendix turned up under liver, enlarged, large perforation, evidently gangrenous and burst two days before; washed out with plain water and packed with gauze; two rubber drainage tubes inserted to keep wound open; pulse rapid when left table; purgatives administered; died.



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CASE 28.—Mr. J. (Dr. J. E. Elliott.) On Wednesday, December 15th, 1898, went on his train to Hamilton, arriving home in in the evening. On way home, to avoid horse and waggon while crossing road, turned and slipped; felt sudden pain in back on right side just behind liver; nauseated and vomited; went home feeling doubled with pain; doctor saw him shortly after; chill; temperature, 102; pulse, 120. Doctor saw him next morning again, and I saw him within twenty-four hours; abdomen rigid, thoracic respiration, tenderness on pressure over McBurney's point and back in loin, rigidity of abdominal muscles chiefly on right side; decided ruptured appendix with posterior attachment; advised immediate operation. December 16th, 1898, Toronto General Hospital, assisted by Dr. Elliott, opened to right of right rectus; appendix curled away back under liver in peculiar manner; found perforation; under surface of liver covered with grayish lymph, like diphtheritic membrane; removed appendix; washed out with plain water, but did not drain. There was pus throughout abdominal cavity; closed; recovered.

CASE 29.—Dr. Y., aged 52. Friday, January 6th, 1899, taken ill; tenderness in abdomen, gradually passed off; improved and went around Saturday. Sunday, pain increased and sent for Dr. Farley; suffering intense pain and gave hypodermic injection; pulse, 140; called Dr. Eakins in consultation; patient requested me sent for; saw him Tuesday night at 9 o'clock; vomiting large quantities blackish-looking fluid; bowels had moved, motions loose and bilious looking; pain all on left side; no tenderness on right; pulse, 90; temperature, 100; did not look well; peculiar drawn appearance of face; on examination of abdomen nothing to be felt; a little more gas than usual; dulness in right loin; advised immediate operation. The other three doctors consulted and decided to allow me to proceed, but patient would rather wait until morning to see condition. Met at 9 a.m.; condition much improved; no rigidity of abdominal muscles; no great tenderness on pressure; vomiting had subsided; temperature and pulse about normal. As it was considered inadvisable, on account of improvement, to operate, I decided to return home. Left at 11.15; arrived home 3 a.m.; at 7.30 p.m. received message to immediately return; arrived at 1 a.m. Thursday morning. January 12th, 1899, at residence, assisted by Dr. Farley, opened to right of right rectus; omentum thickened, unrolled it, and appendix dropped away; pus found; omentum very much thickened in pelvis as well as in right loin; lower half removed; appendix removed. Washed out with plain water; drained; left table with pulse of 140; died.

CASE 30.—H. S., aged 25. (Dr. McCollum.) Taken ill at 11

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p.m. Saturday with pain in stomach; increased, and doctor sent for; saw him 3 a.m. and diagnosed case of appendicitis. I saw patient at 5 p.m. Sunday and advised immediate operation. January 15th, 1899, at St. Michael's Hospital, assisted by Dr. McCollum, opened to right of right rectus muscle; found abdomen full of puro-lymph; appendix turned inwards, coming out between ilium and cecum, almost gangrenous down to base, but not perforated; full of grumous material, very offensive; removed. Washed out with plain water; did not drain; pulse reached 120, but soon dropped to 96; purgatives given; recovered.

CASE 31.—Mr. D. (Dr. Boyd.) One year ago attack of pain while in Vancouver; did not think much about it; a week ago had diarrhea; two days before I saw him had a little discomfort in the neighborhood of appendix; Friday noon felt pretty well, in evening poorly; chill; took hot bath; felt somewhat improved; at 8.30 p.m. sudden pain in abdomen; saw him at 9.15 p.m.; temperature only 99.5; three-quarters of an hour later, temperature, 103; pulse, 110; right rectus muscle rigid; face, pinched expression; vomited; tender on pressure over appendix and full feeling in that region; advised immediate operation. February 24th, 1899, at Toronto General Hospital, opened to right of right rectus muscle; full of sero-pus; appendix almost ulcerated off at base, removed; bowel much thickened. Washed out with plain water and drained; small quantity of opium given; died.

CASE 32.—Frank H. (Dr. T. B. Richardson.) Taken ill at 3 a.m., April 10th, with severe pain in abdomen; at 12 p.m. saw him in consultation; sudden severe pain; vomited three times; tenderness on pressure in right iliac fossa, rigidity on right rectus muscle; a small thickening to be felt beneath wall of abdomen, evidently distended appendix; advised immediate operation. On April 11th, 1899, at residence, assisted by Dr. Richardson, opened to right of right rectus muscle; appendix beneath incision thickened and inflamed, gangrenous at end; removed in usual way; did not wash out or drain; sponged out; purgatives given; recovered after a double pneumonia.

CASE 33.—Amy B., aged 20. (Drs. Godfrey and Tremayne.) Ill for a week or more with appendicitis. On April 13th, 1899, at St. John's Hospital, assisted by Dr. Godfrey, opened to right of right rectus muscle; appendix curled in on outer side of mesentery of cecum, very gangrenous, tissues rather friable; mopped up pus; removed appendix; tube and gauze drainage; closed; some opium given; died.

CASE 34.—L. A., aged 38; pain in abdomen after returning from a trip west. Pain came on at 4 p.m.; ill through night; sent for me in morning; saw patient about 10 a.m.; sudden

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severe pain, rigidity of right rectus, tenderness on pressure; feeling of nausea; temperature, 99½; pulse, 80; advised immediate operation. On August 17th, 1899, at Toronto General Hospital, opened abdomen; pus came out; general peritonitis commencing; appendix gangrenous at tip and perforated; no adhesions; removed. Washed out with normal saline solution; closed; purgatives given; recovered.

CASE 35.—Miss B., aged 17. (Dr. McKenna.) Taken ill Friday night while out for an evening; vomited; Saturday returned to Abbey; felt ill. On Sunday stayed in bed and on Monday, at 3 a.m., sudden severe pain in abdomen. Dr. McKenna saw her at 4 a.m. and again later. I also saw her; pulse, 140; soreness in region of appendix and looked very ill; temperature, 102; decided to operate. January 1st, 1900, at St. Michael's Hospital, assisted by Dr. McKeown; found fluid in peritoneal cavity; evacuated horrible smelling pus from behind cecum; pulse, 160. Washed out with saline and packed in gauze; opium treatment; recovered.

CASE 36.—Olive F. On Tuesday severe pain; saw patient Thursday; abdominal muscles rigid; distention marked; diagnosed appendicitis and purulent peritonitis; advised operation, with but little hope. On June 1st, 1900, assisted by Dr. Bennett, opened abdomen; pus immediately gushed out; abdomen full of pus; coprolith found in appendix; appendix not removed owing to friable condition of bowel around it. Washed out with plain water; drained; purgatives administered; died at 1 p.m.

CASE 37.—Dr. H., Wednesday (31st) taken ill while camping twenty-five miles north of Havelock, on C.P.R., with family; bowels moved once; pain came on while out in boat; went ashore and bowels moved; diarrhea set in; pains still severe; vomited; remained at this place some days until more pain came on and it became intense; took morphine; decided his case was appendicitis and must hurry away; came alone to Toronto; ambulance brought him from the station to hospital; was telephoned to and asked to meet him at hospital; was able to walk; stood up to take off clothing; on examination, found blueness over abdomen, rigidity of muscles, distention, pinched expression of face, feeling of fluctuation on right side; diagnosed general peritonitis; also localized mass in right iliac region that should be opened and drained. On August 2nd, 1901, at the Toronto General Hospital, opened abdomen near ilium; hoped to evacuate fluid without entering peritoneal cavity; fluid free in peritoneal cavity, not encysted, nasty thin pus that smarted fingers; bowels all reddened; evidence of general purulent peritonitis; washed out with normal saline; drained; did not close with stitches; pulse after operation, 84; temperature, the

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night before he told me had been 103; recovered; opium given freely; had fecal fistula, which was operated on. November 26, 1901, returned; soreness across abdomen; incontinence of urine; general weakness; no loss of flesh; found tumor under scar; regular action of bowels; has had some flatulence since operation.

CASE 38.—J. M. (Dr. Clarke.) Taken ill, Thursday (12th); saw him Saturday; decided case was one of general purulent peritonitis from appendicitis; advised immediate operation. September 15th, 1901, assisted by Dr. Clarke, at Peterboro, opened to right of right rectus; pus everywhere; removed gangrenous appendix, also coprolith, from abdominal cavity; could not stitch peritoneum in usual way owing to gangrenous nature of parts. Washed out with plain water; drained; enough opium given to ease pain; died at 9.15 p.m., Saturday (15th).

CASE 39.—Mr. H. (Dr. McKenzie.) Away shooting and taken ill Friday, with pains in abdomen; cramps and nausea; was sent to Toronto. Dr. McKenzie saw him and found pulse 90; temperature, 100 or 101; diagnosed appendicitis. A little while after taken with sudden severe pain in abdomen; Dr. McKenzie found pulse 100. I saw patient, Monday, at 8 p.m.; pulse, 124. Early in afternoon, before severe pain, muscles were not rigid; after pain, muscles became very rigid and board-like; diagnosed perforated appendix and general peritonitis. October, 21st, 1901, at private residence, opened to right of right rectus; peritoneal cavity filled with sero-pus; appendix gangrenous near middle, two large coproliths curled upwards beneath cecum; difficult to remove; washed out with normal saline; drained; opium not pushed; recovered.

CASE 40.—B. H. Child taken sick, Monday (21st); sudden severe pain in abdomen while fastening his shoe; immediately brought to Toronto. Examined and found muscles rigid; decided on immediate operation; temperature, 103; pulse, 124. October 22nd, 1901, Toronto General Hospital, assisted by Dr. Cleveland, opened abdomen; sero-pus all over peritoneal cavity; washed out with saline; removed appendix, which was perforated near tip; closed; some opium given, but not much needed; recovered.

CASE 41.—Mr. G. (Dr. Rowe.) Sick ten days with appendicitis; looked peculiar; hands blue; had not pinched expression; abdomen tense; mass felt on right side near ilium; too weak to sit up; pulse, 56; temperature, one degree below normal. June 9th, 1902, at Grace Hospital, assisted by Dr. Rowe, opened abdomen; found mass consisting of ilium, cecum and omentum; free fluid in peritoneal cavity; whole peritoneum reddened, evidently peritonitis present; pus escaped; appendix removed; bowel perforation closed; washed out with normal

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saline; closed wound; opium and purgatives in treatment; recovered.

CASE 42.—David C., aged 9. (Dr. Cuthbertson.) Taken ill Friday night (27th). Saturday morning doctor saw him; saw him again on Sunday. Monday I saw patient; vomited all Sunday night; Dr. Cuthbertson satisfied Saturday morning that case was appendicitis. June 30th, 1902, at Grace Hospital assisted by Dr. Cuthbertson, opened abdomen; full of pus; washed out with normal saline; removed appendix in usual way; covered with omentum before rupture, but this ruptured again into peritoneal cavity; drained; left portion of wound open; opium treatment; recovery.

CASE 43.—Fred McC., aged 25. (Dr. Eadie.) First week in March, six or eight weeks ill with first attack; returned to work and worked until July 15th; worked all day, feeling miserable but not in any great pain until 10.15 p.m.; sudden violent pain, chill, and rise of temperature. July 16th, 1902, at St. Michael' Hospital, assisted by Dr. Eadie, opened abdomen; appendix fixed down together with ilium and cecum over iliac vessels; general peritoneal cavity full of sero-pus; appendix perforated near tip and contained coprolith. Washed out with normal saline; drained; opium given in considerable quantity; recovered.

CASE 44.—Mrs. M., aged 30. (Dr. Moore.) Patient had been taken suddenly ill with collapse and pain in abdomen. I thought it likely that the uterus had been perforated; she was considerably distended and in a very bad condition; anxious face. On Sept. 22nd, 1902, at her home, I opened abdomen in median line; found the intestines very much reddened and the belly full of pus; appendix found to be healthy; the largest quantity of pus was to be found in the pelvis; ovaries and tubes drawn up and found to be almost gangrenous; a small point could be felt on the wall of the uterus towards the right side; I felt satisfied that this was the point of puncture; gallons of water were used to wash out; drainage tube in cul-de-sac of Douglas; iodoform gauze drains in different directions; patient died two days later. The opium treatment was not carried out in this case.

CASE 45.—Geo. E. (Dr. Chambers.) Taken ill with severe pain November 13th; tenderness, rigidity, vomiting; temperature not much elevated, but during next day became elevated to 104; pulse elevated; looking very ill; several attacks before. November 14th, 1902, at Toronto General Hospital; assisted by Dr. Saunders, House Surgeon, opened abdomen; appendix perforated and general purulent peritonitis. Washed out with normal saline; did not drain; closed; some opium given, not much needed; recovered.

CASE 46.—Mr. W. (Dr. C. J. Hastings.) Taken sick Monday

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(December 29th), with pain in abdomen. I saw patient Thursday with Dr. H.; abdomen distended; dulness in each loin; fulness over appendix; patient of greyish color; circulation not good; pulse, 100; thought rupture of appendix had taken place night before; advised immediate operation, although thought too late. January 1st, 1903, at Grace Hospital, assisted by Dr. Hastings, opened abdomen; pus free in peritoneal cavity and oozing from perforation of appendix; large abscess in appendix. Washed out with normal saline and drained; appendix removed; closed; opium treatment; recovered.

CASE 47.—Mr. M., aged 17. (Dr. Geoffrey Boyd.) Patient been ill three days when I saw him in consultation; pain all on left side; abdomen rigid; expression of the face that usually seen in general peritonitis; vomiting. May 1st, 1903, opened abdomen in median line; cavity of abdomen filled with pus; intestines reddened; general purulent peritonitis. Washed out thoroughly with saline; appendix curled down underneath the ilium and ulcerated so that it was just about detached from the bowel; closed the opening in the bowel and tied off the mesentery of the appendix; packed in Mikulicz drainage and glass drainage to the pelvis; opium treatment; patient lived for about a week; tympanitis disappeared; abdomen became more flaccid; jaundice set in; pulse became rapid.

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# THE MEDICAL TREATMENT OF ADVANCED PULMONARY DISEASE.

By J. FRANK McCONNELL, M.D., Las Cruces, New Mexico.

Since it is a fact that at least seventy-five per cent. of the so-called early cases of pulmonary tuberculosis sent to Southern New Mexico for climatic treatment should be more properly described as advanced, and I regret to state far advanced, it is but meet that those productions of chemists, which have no place in the proper management of the incipient stage, should be given a trial. I have therefore ventured to bring before you a consideration of a number of auxiliaries which in an effort to do something I have felt called upon to exhibit.

Believing, as I do, that no remedy at our command can be proved to have a bactericidal action in phthisis not referable to its internal administration, my sole reason for employing any drug in the treatment of the affection must needs be, firstly, that it will increase the patient's resistance to the disease; secondly, that it will mitigate or palliate some symptomatic disturbance.

In cinnamylic acid, an oxidation product of the oil of cinnamon, we have a drug which, when given, will produce results gratifying alike to patient and physician.

For four years I have been using this remedy in advanced pulmonary phthisis, and my experience is such that I can safely assert that there is no other single remedy at our disposal which will give such a favorable therapeutic action in this disease. I will briefly outline two cases selected at random from more than two hundred, which may serve as types.

Mrs. H., aged 27, referred by Dr. Musser, of Philadelphia, showed positive symptoms of pulmonary tuberculosis in July, 1898; came to New Mexico following October. My examination revealed small cavity at right apex and infiltration downward to third interspace on same side, remainder of lung in good condition. Left apex showed prolongation of expiratory sound, some jerkiness in respiration and some very fine crepitation at intervals after deep inspiration; afternoon temperature fluctuating between 100 and $101\frac{2}{5}$, pulse 86-100; sputum showed tubercle bacilli, short and very straight (always a sign of virulence in my experience), together with staphylocci and baccilli of Pfeiffer.

The patient was placed at perfect rest, the open-air plan of treatment boldly pursued, and all the adjuvants described in my previous papers brought into play, but no real gain was apparent, but rather the reverse, since the left apex commenced

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to break down, the fine crepitation giving place to the dreaded consonating rale. I commenced the use of the cinnamylic acid in the manner hereafter to be described. The improvement was immediate and lasting, the patient being in a good state of health to-day.

CASE 2.—Mrs. S., aged 34, commenced to cough after the birth of her first child, was in a very enfeebled condition for a year, then commenced to gain, became pregnant and was delivered, after which there was a rapid prostration with high fever, purulent expectoration, etc. In October of last year Dr. Tyson, of Philadelphia, communicated with me in regard to her, describing her condition as one in which the right lung was completely riddled and commencing activity at the left apex. I advised against climatic change, as the case seemed hopeless, but suggested the use of cinnamylic acid, which had not been used, stating that if the trouble in left apex cleared up after six weeks' exhibition of the remedy, to send her to New Mexico. Her improvement was immediate, and in less than four weeks I had her under my immediate supervision. I found the left apex apparently without lesion, other than a slight prolongation of the expiratory sound; the treatment, together with a bold plan of open air, rest, therapy has been maintained all winter, patient steadily improving in general health, though right lung is as badly involved as on first examination.

I have here outlined two cases which are typic of the class of patients on whom the treatment has been used. I believe its use in early cases where a proper climatic and hygienic regime cannot be instituted would be beneficial. But my results with early cases without using drugs are so good that I have hesitated to employ the remedy in such cases.

My method of exhibiting the drug is as follows:—

A two per cent. solution of acid cinnamylic (Merck) is made with forty per cent. alcohol, and this is introduced in a finely atomized state into the larynx by means of a good hand atomizer that is provided with a laryngeal tip two or three times daily for a maxium of five minutes. Patients have no difficulty in using the drug after the method is explained to them.

Of course some of the drug reaches the stomach. This is proved by the very remarkable improvement in patients who have a tubercular enteritis, since cinnamylic acid is of considerable value in the diarrheas of the tuberculous.

The remedy to which I attach an importance second only to that exerted by acid cinnamylic is ichthyol. In the subsequent remarks concerning this and other drugs I have endeavored to be exact, and to avoid conclusions not based upon careful clinical inquiry.

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In mentioning some of the remedies described in this monograph to other physicians at various times, I have noted the spirit of incredulity that was evoked, which was directly traceable to the fact that they had become tired of trying medicines which had been consistently boomed, and were ready to look askance at any drug therapeusis advocated for phthisis, thus realizing that extravagant and unfounded claims tend to produce a condition of therapeutic nihilism. I have tried, as I stated at the outset, to make mention only of that which I have by honest investigation concluded to be of value.

Ichthyol (Merck) (the sulpho-ichthyolate of ammonium) has a remarkable action on nutrition and successfully modifies the destructive metabolism which is but another name for disease founded on toxin absorption. I have found that patients bear the drug well, never having noted any marked gastric or duodenal symptoms, which so commonly follow the administration of some remedies—creosote, for example. Its therapeutic action from a clinical standpoint depends on its cough-changing character, since the expectoration invariably becomes thinner, less stringy, tenacious and nummular, is more readily expectorated and quantitatively becomes less. It is therefore a valuable expectorant.

During this time the stethoscope will show an amelioration which is supposedly due to an improvement in the tone and nutrition of the areas immediately proximating the lesion. The appetite is improved and a general condition of well being is not an unusual sequence to its use. It is contra-indicated in markedly febrile cases.

*Mode of Administration.*—After considerable experimentation in this regard, I have concluded that ichthyol is best administered in capsules after meals. For those who are unable to swallow a capsule, it is nicely administered in coffee. I commence with a No. 2 capsule (holding about 10 m.), then gradually change to No. 1 and No. 0 capsules )holding respectively 15 and 20 m.) If there is a diarrhea following its use, a little subgallate of bismuth will prove efficient in combatting a frequent though very transitory sequela.

Ichthoform is a good substitute for ichthyol, embodying as it does all the therapeutic properties of the latter, with the additional advantages of tastelessness and duodenal splitting-up, thus avoiding the eructations, which are disagreeable. Its great objection is the price, since the dose to be effective must not be less than 25 grains.

Creosote and its congeners have been used very extensively by physicians in general practice; but it is noteworthy that the men who have had a considerable experience with an exclusively tuberculous clientele are unanimously opposed to

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their use, this is undoubtedly due to the fact that creosote has found a routine use in all stages and all classes, the result of which empiricism is not difficult to imagine. For my part, I am certain that the drug has no place in the treatment of the incipient stages, yet in the advanced cases where it is indicated it has a considerable range of therapeutic usefulness. The chief indication for its use is in a bronchorrhea, where the sputum is excessive and fetid. Here its action is most pronounced, though terpin hydrate is just as useful under such circumstances; in small doses it is an aid to digestion, and is valuable in those cases where the sputum is swallowed during meals and at other times, out of deference to a prudish modesty. That it has no direct bactericidal action is too well established to need any elaboration on my part. Creosote, like ichthyol, seems to promote nutrition, and for this reason must its dosage be maintained at that point where the digestive tract is undisturbed, since a gastric or duodenal catarrh absolutely interdicts its administration. It should *never* be administered to patients who have scanty expectoration, such cases do much better with ichthyol. In advanced septic conditions the drug is useless, *since it easily disturbs the weakened digestive functions already enfeebled by a long debilitating disease.*

Of the multitude of creosote preparations and derivatives it is an undeniable fact that each is given for the creosote contained. Therefore the preparation best tolerated by the patient, and which at the same time fulfils the indications, is the one to use. My preference is the pure beechwood creosote (Merck), which is administered in capsules after the following method: The patient is ordered a box of capsules, some bismuth and some creosote in separate containers, after each meal he fills the lower half of capsule with bismuth, and with a dropper adds the creosote in the dosage advised. This is a most excellent and agreeable method of exhibition.

In patients who dislike capsules and trouble, creosotal or creosote carbonate makes a good substitute. It costs a little more than the beechwood creosote, but is practically inexpensive compared with guiacol carbonate or duotal, which is so commonly prescribed, and which in my hands has not proven nearly so efficient as the preceding two. The creosote dosage should be small, large doses invariably disturbing the digestion and are rationally non-indicated, *since, if the digestive function is not benefited by the administration of creosote, the effect on the disease is never of value.*

In the marked anemia of the majority of patients suffering from septic absorption, Armour's glycerinated extract of red bone marrow has a most favorable action, the hemacytometer and the Talquist scale affording the most convincing testimony of its hematinic properties.

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Strychnia has been highly recommended by Thomas J. Mays in connection with nitrate of argentum solution injections over the site of the pneumogastric of the affected side. I have had no success with this method. Strychnia alone is a valuable tonic, but is habitually used in excessive and immoderate dosage and for too long a period. The smaller doses given at intervals and suspended as soon as improvement is manifested will give more satisfaction than the large doses which are given routinely for a long period without any particularization.

In this connection I may make mention of the fact that many patients consult physicians and receive a prescription calling for strychnia, when they are already using the drug. Recently I saw a patient who had a wiry pulse, diminished excretion of urinary solids, and all the symptoms of contracted kidneys—an invariable result of toxic doses of strychnia—who was taking the prescriptions of three physicians, each of whom had prescribed strychnia or nux vomica.

Heroin, or in its much better form, the hydrochloride of heroin, like our more ancient friend codeine, has a very conspicuous use in our therapy, it being absolutely necessary to suppress the annoying and body-wrecking cough. This drug is much superior to morphine, since it stimulates rather than depresses the respiratory centre, does not constipate and is not so seductive in its influence; that it has no habit-forming tendency is not literally true, as many of you, no doubt, have discovered. It is cheaper than codeia and does not check expectoration to such an extent as either that drug or morphia. Dose 1/24 to 1/12 grain, and should always be employed in the smallest doses, since the effect is frequently as good as when large doses are administered; combined with terpin hydrate its action is enhanced.

In this place I wish to utter a warning against a proprietary combination of heroin and glycerine, which seems to be in vogue at the present time. Since every patient coming to Las Cruces this past winter has had among his impedimenta an original bottle of the preparation, which I will not name. This combination contains the hypophosphite of ammonium, a most active expectorant which, while of considerable value in bronchitis, is absolutely contra-indicated in phthisis.

My paper would not be complete without a mention of my most valuable symptom quietener—methylene-blue. Of all the drugs I have used to palliate the distressing throat irritation so common in advanced, and far advanced pulmonary disease, with or without laryngeal infiltration and involvement, this preparation is *facile princeps;* for that constant tickling and hacking cough with sensation of dust or a feather in the larynx or trachea, or under the sternum, methylene-blue in a two per

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cent. aqueous solution of Grubler's salt, applied by means of the cotton wrapped laryngeal forceps, will give results unobtainable with heroin, morphine, etc., internally, or orthoform, cocaine, or any other analgesic remedy used locally.

I am conscious of the many deficiencies of this paper, since it is impossible in an article of this scope to take up the various symptomatic disturbances which the phthisio-therapist encounters, yet in presenting the foregoing clinical data I feel that I have brought before you some facts which may prove of benefit in relieving the exigencies of a considerable number of your patients.

[This paper was to have been presented to the section on Medicine at the late meeting of the Ontario Medical Association, but owing to wash-outs along the Rio Grande, the writer was unable to arrive on time.]

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## THE OPERATIVE TREATMENT OF GOITRE.

By GEO. A. BINGHAM, M.B.,

Associate Professor of Surgery and Clinical Surgery, Trinity Medical College; Surgeon to Toronto General Hospital, St. Michael's Hospital and the Hospital for Sick Children, etc.

GENTLEMEN,—When your committee did me the honor of asking me to read a paper before you on this subject I decided to confine myself to a brief account of the operation which I have gradually come to prefer. I shall, therefore, dismiss in a word such methods as dividing the cervical sympathetic, or the use of electricity, about which I hope others may have something to say.

At the outset I think we should lay down some guiding principle as to *when* we should operate. Certainly *all* cases of goitre should not come under the surgeon's knife. For instance, in anemic girls, about puberty, we have seen rapidly-growing, ill-defined goitres, even producing pressure effects, which have gradually disappeared with or without medical treatment.

Again, no goitre should be operated on for purely esthetic reasons. It is not a trifling operation and should not be lightly undertaken by the novice. On the other hand, no patient, however desperate her condition, should be denied the undoubted relief which follows the removal of this obstacle to respiration. In all cases of benign goitre, the patient should first be submitted to a course of medical treatment, unless, of course, the symptoms be urgent. In 1898, Kocher made the statement that 90 per cent. of the goitre cases, coming into the hospital at Berne, were so improved by medical treatment as to require no operation.

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To sum up, in all cases of benign goitre, solid or cystic, operation should only be undertaken for the relief of definite symptoms. In malignant diseases of the thyroid, if an early diagnosis be possible, extirpation of the gland will be the patient's only hope. Unfortunately, early diagnosis is rarely made, and, when seen, the surrounding glands are involved and all hope of a radical cure must be abandoned. In such advanced cases of malignant disease, my rule has been to advise partial removal, only to relieve pressure from the continued growth, and to render possible the future operation of tracheotomy.

In exophthalmic goitre, I have operated twice for the relief of urgent pressure symptoms; and have not regretted doing so. In both cases, immediate relief was experienced and the symptoms of the disease ameliorated.

In this class of cases, there is greater danger of death from the anesthetic; and yet, ordinarily, the patient is too nervous to submit to the operation under local anesthesia. Here an expert anesthetist is required to co-operate with the surgeon. The convalescence is also likely to be decidedly eventful, and to demand watchfulness and keen judgment on the part of the attendant.

Nevertheless, in the case of Grave's disease, failing to respond to prolonged medical treatment, with steady increase of growth, the suffering patient should be given the benefit of operative interference.

Having laid down these working rules as to *when* to operate, the next question to decide is as to *how much* should be removed in a given case. Of course, if but one lobe is involved, only that lobe should be dealt with. I have removed the isthmus alone, when it alone was involved. But, in the ordinary parenchymatous goitre, usually both lobes are unequally involved. At first, it was my practice to remove the whole gland with the exception of a small portion of one lobe. This I now believe to be unnecessary; and, unless both lobes are enormously enlarged, my constant practice is to remove only the larger lobe with the isthmus. Following this method, there has been almost invariably a fairly rapid diminution in the size of the lobe remaining; and, of course, all pressure symptoms are at once relieved.

A word as to the *anesthetic*: The ideal in this regard is of course a thoroughly competent local anesthetic. I know that many men on this continent and in Europe are using cocaine anesthesia in this operation. But, so far, I have employed chloroform, administered by an expert.

In bad cases of dyspnea, the anesthetic is stopped as soon as the skin incision is completed, the operation being continued,

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with little or no further use of it; until the pressure is removed from the trachea and all danger of asphyxia has passed. I believe that by intelligent co-operation between surgeon and expert anesthetist, a patient can thus be "nursed" along through the operation without suffering on his part and with the minimum amount of danger. At the same time, being so lightly anesthetized, the patient by his unconscious phonation, is able to give us assurance of the safety of the recurrent laryngeal nerve.

Now as to *Technique.*

The best incision in the vast majority of cases is the transverse, or shallow U-shaped one extending across the tumor from one sterno-mastoid to the other. The horn of the incision, corresponding to the lobe to be removed, may be extended upward and outward as far as necessary. This incision passes through skin and subcutaneous tissue, platysma and deep cervical fascia.

The two flaps are dissected up and down, and, if necessary, the anterior jugular is cut between ligatures. Next, the pre-tracheal layer of the cervical fascia is recognized and very carefully incised vertically in the median line. Immediately beneath this layer is the capsule of the tumor, and if care is not taken this capsule is opened up and the field of operation is flooded with hemorrhage, very difficult to control. In other words, the operation will be a practically bloodless, or a dangerously bloody, one, according as the surgeon is, or is not, extremely careful in working close to, but outside, the capsule.

The opening in the pre-tracheal fascia is enlarged as required, the finger introduced, and, by this means, any adhesions between fascia and capsule are readily broken down. The finger is then swept around the outer and upper margin of the tumor, forcing the pre-tracheal fascia and muscles over the edge of the mass, and the superior thyroid vessels are recognized and cut between clamps.

This usually releases the outer part of the lobe, which may now be drawn forward, and still, with the finger as a blunt dissector. Everything is stripped away from the posterior wall of the capsule, gradually rolling the lobe over to the middle line. If care is taken to strip everything cleanly and completely from the posterior part of the capsule, the recurrent laryngeal nerve will necessarily be pushed away from the inferior thyroid vessels and all danger of injury to it removed.

The inferior thyroid vessels are tied off, close to the tumor; and the lobe is now completely freed, and we see the rings of the trachea to which the isthmus is adherent. Here there is a decided danger of injury to the trachea, the wall of which is probably atrophied by long-continued pressure. No violence must be used in separating the isthmus, and, indeed, I

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have again and again left a small portion of the posterior wall of the isthmus, which was adherent to the trachea, rather than risk its separation. The junction of the isthmus with the opposite lobe is now transfixed with silk and tied off, and the mass cut away.

This ligating of the pedicle, while unnecessary so far as hemorrhage is concerned, still, I think, serves a purpose in preventing the escape of thyroid secretion into the wound, which is the probable cause of some rather disagreeable symptoms which occasionally arise during convalescence. Every smallest bleeding point should be tied off with fine silk, and some means adopted to obliterate the huge "dead space," which, in cases of large tumors, is left behind sternum and clavicle. This cavity is a serious menace to the patient's life from the accumulation and decomposition of secretions. I have found the following method of dealing with it to answer well. With a small, fully curved needle, armed with fine catgut, I quilt the anterior and posterior walls of the space together by an over-lying series of running sutures. The first line of sutures will be at the bottom of the space, the next a little higher, and so on until the whole space is snugly obliterated to the level of the top of the sternum.

I believe in temporary drainage, and now use the method suggested by Cheyne. A button-hole is cut through the lower flap, just above the sternum, and a small tube drawn through, the inner end of which lies in the lowest part of the wound, behind the sterno-mastoid.

A provisional sature is placed in this little wound and, when the tube is withdrawn (after 48 hours), is tied. If the pre-tracheal, or sterno-mastoid, muscles have been cut, they should now be carefully reunited and the wound in the pre-tracheal fascia closed. A running sature of fine silk closes the skin-wound, plenty of dressing applied, and the head is supported between two sand-bags. A very important precaution is to direct the nurse to control all violent movements of the head, while the patient is recovering consciousness, and to compress the dressings gently during vomiting. This latter may often be avoided by a hypodermic of morphia just before beginning the operation. The tachycardia and high temperature, which are sometimes so troublesome, may be controlled by digitaline and the local use of the ice-bags.

In case of adenoma or cystoma of the thyroid, the procedure just detailed is modified. When the gland is exposed, the capsule is carefully cut through and the tumor, solid or cystic, is enucleated. Of course, some hemorrhage from the capsule is unavoidable, but is readily controlled. Partial, or complete aphonia may follow the operation. It may result from (*a*) traumatism of the recurrent

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laryngeal nerve; (*b*) traumatic tracheitis and laryngitis; or (*c*) hysteria. Usually the difficulty is only temporary. From a medico-legal point of view, it is interesting to note the history of one of my cases. She was a decidedly neurotic maiden lady, aged 35 years. Complete aphonia followed the operation of removing almost the whole of both lobes in a very large goitre. The vocal chords were pronounced, by the laryngologist, to be cadaveric; and the patient went home improved in every other way, but quite voiceless. Her account was sent to her, and, in reply, a rather nasty letter was received and we looked for legal complications. Suddenly, one morning, nine months after the operation, she awoke with her voice fully restored and, among other results, a letter from a grateful patient and a cheque were not the least desirable. As to the mortality of the operation, that, as you know, has been steadily declining of late years. I have notes of 33 cases operated upon, three of which were malignant and two were cases of exophthalmic goitre. I have had no death directly following the operation. One of the malignant cases, an old lady of 70, insisted on going home to the country two weeks after the operation, and, after a long railway journey, died suddenly at her own railway station, I judge from exhaustion. A second malignant case died some six months later from recurrence. The third was a case of sarcoma with very distressing dyspnea. The operation was a desperate one, artificial resperation having to be carried out during the time she was on the table. She rallied nicely and felt much relieved, but died a week later from uremia. This patient was known to have Bright's disease, but was very anxious for the operation, expressing herself as delighted with the result.

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## APPENDICITIS FROM THE STANDPOINT OF THE COUNTRY DOCTOR.

By JOHN W. S. McCULLOUGH, M.D., Alliston, Ont.

Appendicitis is a very common and frequently fatal affection. It is the cause of the majority of cases of peritonitis in the male and of the most of those in the female, excepting those cases which arise in connection with some affection of the genito-urinary organs.

There are a few facts relating to the appendix which tend to make apparent why this organ is so liable to inflammatory affections. First of all it is understood to be a degenerate organ without any known function. Consequently it has poor nutrition. Added to this it has a scanty blood supply. There



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is but one small artery from the ileo-colic branch of the superior mesenteric. Its mesentery often does not reach nearly to the distal end of the organ. It is a blind pouch with small calibre, and such slender canals are known to be liable to stricture. Its walls have no circular muscular fibres and consequently it is unable to readily empty itself of the fecal matter and various foreign bodies with which, in its dependent position, it is liable to become distended. It has a relatively large amount of lymphoid tissue in its walls. Its powers of absorption are large and the contents soon become dry and harden. Its contents from their very nature are the habitat of various bacteria. It frequently lies upon the psoas muscle and is therefore liable to irritation from the constant movement of this muscle.

Inflammation of the appendix may begin in its mucosa. The lining membrane may afford an entrance to bacteria through an erosion produced by hardened fecal matter or a foreign body. Pressure of its contents may cause stasis of the feeble circulation, and by lowering nutrition of the mucosa allow of the invasion of the colon or other bacillus. Kinking or distortion of the mesentery or a thrombosis of the blood vessel may cut off the circulation. These two factors, lowered nutrition from whatever cause and the entrance of bacteria, are the foundations of the pathology of appendicitis. Resulting from these conditions we may have either the mildest of attacks, productive simply of colic, or a local inflammation of a portion of the mucosa with eventual formation of a tiny stricture of its lumen, swelling and hyperplasia of the whole organ, ulceration, perforation, gangrene of a portion or all of the appendix, the formation of a circumscribed abscess, pus formation in the subperitoneal tissue or general septic peritonitis. The progress may be very slow and the disease may succumb to nature's efforts at a cure or it may be so rapid that a few hours may decide the fate of the patient.

If the attack is a mild one and the patient happily recovers a condition may be and frequently is left which more than ever leaves him susceptible to future attacks. The strictured condition often seen after more or less mild attacks, allows of the contents of the appendix to the distal side of the stricture becoming very hard and acting as a foreign body. Serous inflammation may have bound the organ to other portions of the intestines or to other organs, to its own mesentery or to itself. Some of these conditions may account for the constipation, the pain and the digestive disturbances seen in chronic cases.

*Symptoms.*—The most important symptoms are sudden acute pain in the abdomen, nausea and vomiting, with coincident or subsequent rigidity of the abdominal muscles of the right side

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and tenderness in right iliac region, the pain is colicky, is spoken of by the laity as "cramps" and is due to reflex irritation carried through the branches of the superior mesenteric plexus. The nausea and vomiting are due to irritation of the sympathetic nerves. The rigidity is due to the fact that the muscles are striving to protect the tender organ underneath while the tenderness itself shows that peritonitis has commenced.

While these are the earliest and most characteristic symptoms there are usually some fever and increase in the pulse-rate. Some authorities instruct us to pay little attention to the pulse and temperature, yet they undoubtedly when they are carefully considered, afford some assistance. If the affection is due to the colon bacillus, which perhaps the larger number of these cases are, the temperature and pulse may be but little elevated. If due to a streptococcus or mixed infection the temperature may reach 102° to 3° F or more with a correspondingly rapid pulse. With the condition of perforation or gangrene of the appendix the pulse and temperature may be normal or subnormal. If the case is making unfavorable progress the tenderness may increase and may be elicited by pressure on the left side. There may be more or less distention of the abdomen. Delirium, persistent vomiting, signs of shock, and chills are unfavorable symptoms. The condition of the bowels may be unchanged or there may be constipation or diarrhea. The patient's face may show anxiety. The appetite is usually gone. Hiccough is a most unfavorable symptom.

*Diagnosis.*—A correct diagnosis and especially an early one is most important. Fortunately in most of cases when seen early it is not particularly difficult, but it is much more difficult and often well-nigh impossible to say at a later period just what condition will be found inside the abdomen. I have known cases operated on within fifteen hours after the onset of first symptoms and a circumscribed abscess found, and I have known others in which the attending surgeon refused operation (not believing it necessary as the patient appeared to be improving) to subsequently have a large collection of pus in the abdominal cavity. Occasionally pain and tenderness may be confined to the left side. These cases are ones in which there is either a long appendix pointing towards the left side or else there are adhesions confining a branch of a nerve through which the pain is reflexly carried. One of the earliest chronic cases I saw had no pain except in the region of the lower border of the ribs on the left side. The appendix was hard, bent on itself like one's flexed little finger and with its tip adherent to the caecum. Following its removal there has been no pain for the last seven years. The cardinal symptoms

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of sudden acute pain beginning in the region of the umbilicus with nausea, vomiting and rigidity of the muscles, followed by tenderness over McBurney's point are the ones to be relied on in making a diagnosis.

We will require to differentiate between Appendicitis and

1. Tubo-ovarian disease.
2. Affections of the Gall-Bladder and Ducts.
3. Affections of the kidney.
4. Affections of other portions of the intestines.

1. *Tubo-Ovarian Disease.*—In this disease, which is more common on the left than on the right side, the pain is not usually so sudden in its onset nor so collicky. There is not the rigidity of the abdominal wall which is found in appendicitis. A history of genito-urinary disease if it can be obtained will aid in clearing up the diagnosis. Most helpful of all will be an examination under anesthesia.

In ectopic gestation the sudden collapse following rupture of the sac might be confounded with perforation in appendicitis. The puerperal age and the symptoms of pregnancy if such can be obtained will be of value in separating the affections.

2. Affections of the Gall-Bladder and Ducts. In hepatic colic the pain is found in the upper part of the abdomen and radiates towards the right shoulder. There may be tenderness over the gall-bladder, vomiting is more presistent than in appendicitis. The temperature is irregular, high at sometimes and low at others. There is often jaundice.

In cases of collapse from rupture of the gall-bladder an error might be made, usually, however, there is some history which will clear up the case. But in other cases nothing but an exploratory incision will diagnose the condition.

3. Renal colic may be confused with appendicitis. I recollect seeing a patient in consultation who had an unmistakable attack of renal colic and along with it appendicitis, for which he was operated on in a few days.

4. Illustrative of the difficulty in separating this from other intestinal affections, permit me to give a few notes of a rather unique case I saw a short time ago. The patient was a hearty baby girl, sixteen and one-half months old. She had some pain and vomiting at 10 p.m., Sunday, for which her mother gave a dose of castor oil. As a result she slept all night and at 1 p.m., Monday, the bowels moved freely. She had a return of the pain and vomiting. I saw her at 3 p.m., and found her in a state of shock, for which I gave a saline enema, mustard bath and gr. one-sixtieth strych. sulph. hypodermatically. She was relieved for a couple of hours. On return of pain a second enema was given. There was a slight discharge of blood from the bowel but no tenemus. The pain and vomiting recurred

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with greater severity. There developed tenderness and rigidity on the right side of the abdomen, with perhaps a slight distention. A colleague in consultation with me that evening agreed as to the likelihood of appendicitis but suggested that considering the severe shock and the passage of blood that there might be a volvulus. There being an increase of the symptoms I did a celiotomy next morning, 36 hours after onset of first symptoms, and removed a highly inflamed appendix almost black for an inch at the tip, and found in addition a volvulus of about six inches of the ileum just above its junction with the large bowel. There was a knuckle of the ileum pushed in the angle formed by the cæcum and its mesentery and adherent there. About four inches of the ileum were dark and angry looking. Hot gauge compresses were assiduously applied and after half an hour the circulation was restored and the abdominal wound closed without drainage. The little patient has made a prompt recovery. In this case I cannot say which was the primary condition, nor whether one had anything to do with the production of the other.

*Treatment.*—In the light of our knowledge of the pathological conditions found in appendicitis the treatment in all but the mildest cases should be surgical. At the outset the patient should be given an enema and a mild laxative such as castor oil or repeated small doses of calomel. For the relief of pain chloroform water or spirits of chloroform may be given as required.

Every case must be treated on its own merits, but any case that does not show improvement or which gets progressively worse during the first 24 hours should be operated upon. Mild cases undoubtedly get well without much treatment of any kind, but with due deference to those who pin their faith to the opium or morphine treatment I doubt if it ever effects anything in appendicitis except to ease the pain and fool everyone about the case who is not on the alert as to its masking qualities.

But opium has its place all right, and having decided upon operation and while making preparations to open the abdomen a dose of morphine, combined with atropine and strychnine, will do good service in quieting the nerves of the patient and will leave him in better condition for operation than if he is allowed to suffer without it. The dose should not be large, and its purpose understood.

It is not so easy to operate in the country as in a city. But notwithstanding the absence of well equipped operating rooms, the best surgical appliances and good nurses, good results are obtained in the surgical treatment of this affection by the country doctor, and for two reasons. He can operate at the earliest possible moment when he has the best prospect of success, and the absence of noise and dust incident to a city

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with the benefit derived from pure air perhaps go far to make up for what he may lack in surgical skill and surroundings.

The operation in uncomplicated cases of appendicitis is a comparatively easy one, and with ordinary equipment and scrupulous attention to aseptic conditions these cases do well. If the country doctor is constantly on the alert in appendicitis cases few of them should become complicated. If they go for days or weeks without improvement a condition may be eventually found which will tax the skill of the most experienced.

In cases which have gone to the formation of a local circumscribed abscess the pus should be washed out or gently swabbed out. If the appendix, or what remans of it, can be readily recognized it may be removed, but the greatest care must be taken not to disturb the limiting wall of the abscess. In these abscess cases we should be reasonably satisfied that more than one pus collection does not exist. Cases of general septic peritonitis should be judged on their merits, and we should operate or not just as we deem best in the interest of our patients. For the sake of our reputation perhaps a large number of these cases had best be left alone.

Finally, in all cases where the country doctor decides to operate he will but conduce to the patient's comfort and safety, and his own success and peace of mind by having a good trained nurse. Perhaps no other adjunct except his skill as a diagnostician and an operator will make so much for success as this factor.

The mild cases should be operated on in the interval. In chronic cases all are agreed as to operation. Fulminant cases require to be operated on without an hour's delay.

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# Editorials.

## AMALGAMATION OF TORONTO MEDICAL COLLEGES.

Negotiations of an important character have been going on between the authorities of the universities of Trinity and Toronto for about two years. Considerable progress was made last autumn; but for a season thereafter both sides appeared to be *marking time*. In the meantime, Trinity was becoming stronger and more hopeful, and her many friends were taking an unusual active interest in her welfare. A few weeks ago Trinity Medical College became the Medical Faculty of Trinity University. The university authorities proposed to erect and equip new buildings for their new faculty.

While it was understood that the university and its medical faculty would stand by each other, the whole complex question of federation and amalgamation became to a certain extent simplified. That is to say, Trinity's absorption of the medical college meant that if federation in Arts took place amalgamation of the medical faculties must occur at the same time. A short time ago it was rumored that amalgamation would be accomplished in a very short time. It was thought by many that a satisfactory union of the two faculties would involve much time and many difficulties. Fortunately, however, the matter had before received very careful consideration by teachers on both sides, and now we are told by the public press that amalgamation is not a dreamer's dream, but probably an actual fact, although at the time of writing no official announcement has been made.

As far as the two teaching staffs were concerned both sides have had to concede much. We cannot now discuss particulars which have not yet been made public, but hope to be able to do so in the near future. We may say, in a general way, that the majority of both faculties are well satisfied with present arrangements, so far as they have been completed. We regret that Dr. W. B. Geikie is still hostile to the scheme, as his letter published in this issue clearly indicates.

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Considerable interest has been manifested by outsiders in the negotiations respecting amalgamation and federation. Dr. Roddick, at the recent convocation proceedings at McGill University, spoke as follows: "The competitors to the west and south of us are growing stronger every day. The faculties of medicine of Toronto and Trinity Universities have practically completed a scheme of amalgamation. These, singly, were very powerful competitors, but if they join their forces their strength will be increased fourfold." We believe it is now generally conceded that amalgamation, if completed as now expected, will create an extremely strong and well-equipped school, and will advance the cause of higher medical education in Ontario.

## GREAT BRITAIN AND FRANCE.

Canadians take much interest in the relationships existing between Great Britain and France and are much pleased at the present *entente cordiale* between the two nations, which has been established largely through the visits of King Edward to France and M. Loubet to England.

The *British Medical Journal* in making certain references to M. Loubet's visit to London and especially to the French Hospital in Shaftesbury Avenue, concludes an interesting article as follows: "The debt which science owes to France is nowhere more heartily recognized than in this country. In physics, astronomy, chemistry, physiology, and pathology especially, we know how the wide and brilliant generalizations, and the accurate and painstaking researches of Frenchmen of science have illumined many dark places, and how the acute logical genius of the French nation has often produced order out of chaos by systematising knowledge.

"The medical profession, at any rate in this country, will never forget the debt owed by physiology to Claude Bernard, by clinical medicine to Trousseau, and by pathology and hygiene to Pasteur, nor will it ever forget the welcome extended to our Lister at the Pasteur Jubilee in Paris. We venture to believe that the sincere respect which has always existed between the men of science of the two nations has had a not unimportant influence in bringing about the present *rapprochement*."

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## CANNED FOODS.

The consumption of "tinned" or "canned" fish, meat, vegetables, and fruit is largely increasing, and the number of people who camp in summer and use daily one or other of these articles is considerable. This practice is not free from danger. The tin can, though hermetically sealed, acts in warm weather somewhat like an autoclave, and the long-continued maceration of complex organic substances, as well as the action of organic acids upon the impure tin and solder used in cheap cans, favor chemical changes which may render the food unpalatable and perhaps unwholesome.

Some cases of poisoning from canned salmon were investigated last year by the Dominion Government, and a good many of our readers could furnish similar cases from their own case-books.

A good deal might be done to improve canned food, but in the meantime there is one eminently practical suggestion which was apparently first made by H. E. Mann, Medical Officer of the East African Protectorate. This suggestion is that all manufacturers of canned foods should be compelled by law to stamp on the tins the date on which the food was canned. We think this law should be passed at once in Canada.

## THE ONTARIO MEDICAL COUNCIL.

The recent meeting of the Ontario Medical Council did not furnish much in the way of new legislation, but was quite interesting in certain respects. The members showed a disposition to discuss important matters in a more judicious spirit than usual. There was but little of that acrimonious sort of a heated warfare which so materially marred many of the meetings in recent years.

The Property Committee, of which Dr. Thorburn is chairman, advised that the Council again direct that every effort be made to dispose of the present office building, and should this be ineffectual, to rearrange the mortgage on the premises before November 1st. During the year the rentals from the offices in

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the building amounted to $4,200, and the mortgage was reduced $5,000, leaving it now at $55,000.

The Discipline Committee, in their report called the attention of the Council, and of the members of the medical profession generally, to the fact that all recommendations from the doctors of the province regarding contraversions of the Medical Act, have been treated confidentially, and stated that they had received several communications, complaining of fifth year students violating the Act, and regarding medical practitioners who were shielding men in practice who had not registered.

A committee was appointed to consider and report on the advisability of the Council seeking legislation against all forms of quackery not covered in the Medical Act. It comprises Drs. Gray, Campbell, Mearns, Glasgow, Stuart, Britton, and Macdonald.

A sub-committee was also instructed to consider carefully many matters connected with the curriculum, and especially as to matriculation and a programme for the fifth year, and report at the next meeting.

## CANADIAN MEDICAL ASSOCIATION.

We learn from the General Secretary of the Canadian Medical Association that the coming meeting, which will be held in London, August 25th to 28th, is likely to be successful in all respects. The following is a partial list of the addresses and papers promised:

President's Address, W. H. Moorhouse, London; Address in Medicine, James Stewart, Montreal; Address in Surgery, Alex. Hugh Ferguson, Chicago; Address in Gynecology, Matthew D. Mann, Buffalo; "The Treatment of the Inebriate," A. M. Rosebrugh, Toronto; Paper (title to be announced), Perry G. Goldsmith, Belleville; "Total Ablation by Bisecting the Uterus," T. Shaw Webster, Toronto; "Inguinal Hernia of an Undeveloped Uterus and Appendages with Presentation of Specimen," R. Ferguson, London; Paper (title to be announced), A. Lapthorne Smith, Montreal; "Report of Two Cases of Hour-Glass Contraction of Stomach," Henry Howitt, Guelph; "Cardiac Affections in Influenza," E. G. Wood, Nashville, Tenn.; "Amyotrophic

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Lateral Sclerosis," A. McPhedran, Toronto; "Orthopedic Surgery at the Present Time," G. W. Wilson, Montreal; "Internal Medication for Direct Remedial Effect," Geo. M. Aylesworth, Collingwood; "The Rôle of Eye-Strain in Civilization and Medicine," George M. Gould, Philadelphia; "The Interrelations of Diabetes and Other Constitutional States," Geo. F. Butler, Alma, Michigan; "Gunshot Wound of the Upper Arm, with Non-union of Humerus and Destruction of Musculo-Spiral Nerve—Operation, six months later; Recovery," Hadley Williams, London; Discussion on the "Treatment of Typhoid Fever," W. P. Caven, Toronto; John Herald, Kingston; W. B. Thistle, Toronto; H. A. McCallum, London; Discussion on the "Diagnosis and Treatment of Tubercular Peritonitis," A. B. Atherton, Fredericton, N.B.; A. Groves, Fergus; Herbert A. Bruce, Toronto, and L. Coyteux Prevost, Ottawa; "The Technique of Gastro-Enterostomy," Theodore A. McGraw, Detroit; "The Relation between the General Practitioner and the Specialist in regard to Intra-nasal Work," J. Price Brown, Toronto; "Personal Experiences with Alexander's Operation," H. Meek, London; "Anto-infection," E. Hornibrook, Cherokee, Iowa; "The Country Doctor," J. S. Sprague, Stirling; "A Lantern Lecture on Open-Air Life in the Treatment of Pulmonary Tuberculosis," J. H. Elliott, Gravenhurst; "The Size of the Pupil as an Aid to Diagnosis," T. G. Duncan, Toronto; "Thrombosis of the Femoral Vein Following Aseptic Laparotomy," E. B. Secord, Brantford; "Gastro-Enterostomy, with Report of Cases," Ingersoll Olmstead, Hamilton; "Radical Cure of Hernia," A. Groves, Fergus; "The Decline and Fall of Atropine," G. Stirling Ryerson, Toronto; "The Medical Treatment of Diseases of the Nose and Throat," John Hunter, Toronto; "An Interesting Case," G. Herbert Burnham, Toronto; "Concealed Accidental Hemorrhage," Adam H. Wright, Toronto; "The Surgical Treatment of Bunions by Tubby's Operation," James Newell, Watford, Ont.

## Railway Transportation.

Intending delegates to the thirty-sixth annual meeting of the Canadian Medical Association which will be held at London, Ont., on the 25th to the 28th of August, should take careful note of the following instructions as regards transportation

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rates. As a good many wrote to the General Secretary last year for forms to fill in, it might be well to state that no such forms are required. All a delegate has to do is to purchase a single first-class ticket to London and at the same time asking the agent at starting-point for a *Standard Convention Certificate.* These certificates, when signed by the General Secretary, will entitle holders thereof to return fare free providing there are 300 or more at the meeting holding *Standard Convention Certificates.* These arrangements apply as well to the wives and daughters of physicians.

### MARITIME PROVINCES.

Delegates travelling to London on the Standard Certificate plan *via* the Intercolonial Railway to Montreal will be given return fare free from Montreal east provided that there are ten or more delegates in attendance at the meeting holding said certificates.

### MANITOBA AND THE TERRITORIES.

From Manitoba and the Canadian North-West one-way tickets to be purchased to London and Standard Certificate being secured at the time of purchase, these certificates when presented at London, duly signed by the General Secretary, will entitle the holder thereof to be returned free if 300 or more paying railroad fare are in attendance. If less that 300 or more that 50 the same arrangements as for Ontario and Quebec, viz., one-third fare return will be in vogue. Tickets purchased west of Port Arthur, purchased in time to reach London for the convention, will be accepted for return up to and including September 15th. Delegates taking the Superior and Huron Lake route one way will, on presentation of certificates, be charged $4.25 extra. If lake route is used both ways the charge will be $8.50.

### BRITISH COLUMBIA.

The Canadian Pacific Railway officials at Winnipeg have not been able to make arrangements for British Columbia up to the present time. Announcements of these will be made in the daily papers of Vancouver and Victoria, if secured, some time during the first week in August.

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## Entertainments.

The Entertainment Committee at London proposes to entertain visiting delegates somewhat as follows:

On Wednesday afternoon a reception will be held at the Kennels for the visiting ladies by the ladies of London. On the same afternoon at, about 4 p.m., the members of the Association will be entertained at Springbank, London's pleasure resort. Leaving Springbank at about 5.30 p.m., the delegates will be taken to the London Asylum grounds, where they will be entertained by the Provincial Government for the balance of the evening. On Thursday, through the kindness of Messrs. Parke, Davis & Co., the Entertainment Committee have provided for an excursion to the celebrated laboratories of this extensive pharmaceutical house at Walkerville and Detroit. Arrangements have been made for a special vestibuled train to leave London at 8 a.m. sharp, Thursday. Walkerville will be reached at about 10.30 a.m., and a visit will be made to the Walkerville laboratories. The delegates will then be taken for a trip up the river, luncheon to be served on board. They will be landed at Messrs. Parke, Davis & Cos'. dock at the Detroit laboratory for the inspection of their scientific building at about 2.30 p.m. At the conclusion of this inspection other arrangements will be made for the entertainment of the members until 6.30 p.m., when a banquet will be tendered to the members of the Canadian Medical Association at the Russell House, Detroit, by Messrs. Parke, Davis & Co. Between 9.30 p.m. and 10.30 p.m., the physicians will be taken to the Brush St. depot, Detroit, and return to London by a special train.

## Hotel Accommodation, Etc.

During the coming meeting of the Canadian Medical Association in London the several large hotels will be able to accommodate most of the visiting members, and in addition to this, the Reception Committee having charge of receiving the visiting delegates will have lists of good boarding-houses, where those wishing them may have rooms. The Reception Committee at London hopes that no one will stay away fearing the lack of accommodation, as the London medical men will do their utmost to make their stay agreeable. Dr. J. S. Niven, 423

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Colborne St., who is Chairman of the Reception Committee, will be pleased to secure rooms for anyone writing for them in advance. Anyone desiring any further information should address either the Local Secretary, Dr. Hadley Williams, Park Avenue, London, or the General Secretary, Dr. George Elliott, 129 John St., Toronto.

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The following graduates in medicine and members of the College of Physicians and Surgeons of Ontario have been appointed house surgeons at the Toronto General Hospital for the year 1903-1904:—From Toronto University: W. A. Cerswell, Bond Head; J. A. S. Graham, Toronto; N. T. McLaurin, Toronto; E. M. Walker, Toronto; A. B. Wright, Toronto; alternates, G. A. Winters, J. A. Parry. From Trinity University: Edgar Brandon, Cannington; R. W. Irving, Ingersol; M. J. Harris, Glencoe; W. A. McCauley, Warkworth; H. Rundle, Emsdale; alternates, M. Cook, T. H. Bell. The following having completed their term are now retiring, after a year's service on the house staff, 1902-1903: J. D. Chisholm, Berlin; S. Johnston, Toronto; R. Neil Kyles, Camilla; W. H. Lowrey, Guelph; J. A. McCullum, Toronto; R. H. Mullin, Hamilton; R. Parsons, Emery; A. B. Rutherford, Owen Sound; P. W. Saunders, Toronto; G. W. Ross, Toronto.

Hospital for Sick Children, Toronto: James L. Biggar, Toronto; W. Edward Gallie, Barrie; Allen W. Canfield, Woodstock; R. A. Fraser, Toronto.

Grace Hospital, Toronto: R. W. Rutherford, C. A. Warren and G. E. Wilson.

St. Michael's Hospital, Toronto: C. S. Wainright, F. J. Doherty, Jno. Baldwin, B. Sullivan.

Western Hospital, Toronto: W. A. Graham.

City Hospital, Hamilton: C. E. Freeman, D. P. Kappele.

General Hospital, Ottawa: D. M. McCarthy.

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Sir Gilbert Parker entertained at a luncheon in the House of Commons, July 8th, delegates and representatives of the various colonial universities. The representatives of Trinity University were Mr. Christopher Robinson, Chancellor, and Mr. Travers Lewis; Toronto University, Drs. Reeve and Cameron; McGill University, Lord Strathcona and Principal Peterson. The Colonial Secretary, Mr. Chamberlain, delivered an interesting address.

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# Personals.

Dr. P. E. Doolittle has been elected President of the Toronto Automobile Club.

Dr. R. D. Rudolf has gone to Germany, where he will remain about two months.

Dr. Jos. W. Lesslie, of Toronto, who went to England early in May, returned July 15th.

Dr. H. A. Galloway, of Toronto, is occupying a lodge on Eagle Mount, near Peterboro'.

Dr. C. S. Draeske (Tor. '93) has been appointed Surgeon to the C. P. Steamship *Empress of India.*

Dr. A. Orr Hastings went to Prout's Neck, Maine, July 21st, and expected to remain there a few weeks.

Dr. John L. Davison returned to Toronto July 16th, after a cruise from Quebec to the coast of Labrador.

Dr. L. F. Miller, of Toronto, is at present a guest at the "Manor Richelieu," Murray Building, Quebec.

Dr. J. Frank McConnell (Tor. '95), of Las Cruces, New Mexico, is spending a few weeks with his parents in Toronto.

Dr. George Fierheller (Trin. '84), who practised in Markham for nineteen years, has removed to 535 Sherbourne Street, Toronto.

Dr. J. M. Waters (Trin. '02) has been appointed to the position recently held by Dr. W. Russel, in the important Mission at Indore, Central India.

Dr. Murray McFarlane left Toronto July 17th for a six weeks' trip to Muskoka, Lake Nipissing, and Lake George in the Adirondack District.

Dr. S. M. Hay, of Toronto, is spending the greater portion of the summer in Muskoka. Dr. F. Large, of Listowel, is attending to his practice during his absence.

Dr. Henry M. Featherstone (Trin. '95), of Toronto, left July 21st, for Montreal and sailed for Glasgow July 22nd. He expects to spend some time at post-graduate work in Edinburgh and London.

Dr. J. Orlando Orr, of Toronto, visits his family at the King's Royal, Owen Sound, every Saturday, but returns as early as possible on Monday morning to look after his exhibition, which, thanks to his energy, tact and ability, promises to be the best that Toronto has seen.

At the recent meeting of the Ontario Medical Council the following officers were elected: President, Dr. J. A. Robertson, Stratford; Vice-President, Hon. Dr. Sullivan, Kingston; Treasurer, Dr. H. Wilberforce Aikins, Toronto; Registrar, Dr. R. A. Pyne, M.P.P., Toronto; Solicitor, Christopher Robinson, K.C.; Stenographer for College, Alex. Downey; Auditor, Dr. J. C. Patton, Toronto; Prosecutor, Chas. Ross, Toronto.

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# Obituary.

## HERBERT MICKLE, M.D., M.R.C.S., Eng., L.R.C.P., Lond.

Dr. Mickle, a graduate of Trinity University in 1880, died at Asheville, N.C., July 21st. He practised in Buffalo for some years, and was Associate Professor of Surgery in Niagara University. In January last he accepted the position of director of the Cleveland Branch of the New York Life Insurance Company. He went South in June on account of ill health, and was supposed to be recovering when news came that he was dead. The remains were buried in Toronto, July 25th. Among his relatives who survive are Mrs. W. H. Ellis and Mrs. Bertram Spencer, of Toronto, sisters.

## W. J. NEILSON, M.D.

Dr. W. J. Neilson, ex-M.P.P. for North Winnipeg, died July 17th, in the Winnipeg General Hospital, aged 49, after a long illness from some affection of the lungs, caused by the entrance of a foreign body into the trachea about a year ago. He was a native of Perth, Ontario, and a graduate of McGill in 1878. From that date until the time of his illness he practised in Winnipeg, and was one of the most popular physicians of that city.

## DONALD MACLEAN, M.D.

Dr. D. Maclean, of Detroit, died July 24th from gastro-enteritis, aged 64. He was a Canadian, born in East Northumberland, Ontario. He received his medical education in Edinburgh, where he and the late Dr. Carson, of Toronto, worked together for a time under Syme. After graduating in 1862 he practised for eight years in Kingston, Ont., with the exception of 1863 and 1864, when he was an acting surgeon in the United States army. He went to Detroit in 1870, and held the chair of surgery in the University of Michigan from 1870 till 1889. He was for a number of years chief surgeon to the Michigan Central and Grand Trunk Railways, and was president of the American Medical Association in 1894.

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## ADDRESS TO DR. W. B. GEIKIE.

We, the Corporation of Trinity Medical College, in accepting the resignation of Dr. Walter B. Geikie, D.C.L., F.R.C.S.E., L.R.C.P., London, Dean of the Faculty and Professor of the Principles and Practice of Medicine, desire to place on record our sense of the debt of gratitude owing to our late associate, for his two and thirty years of earnest and self-sacrificing labor on behalf of the College. At all times, in season and out of season, by night and by day, year after year, the cause of Trinity Medical College has ever been foremost in his thoughts, and the one object around which his affections centered.

With every energy and faculty he possessed, Dr. Geikie labored to promote what he considered the best interests of the College which was so dear to his heart, and owing to a large degree to these unwearied efforts, Trinity Medical College has attained the present proud position.

It is with feelings of regret that the Corporation parts with him who is the father in medicine of most of its members, who has presided over its meetings, and piloted its ship through so many breakers, and we, one and all, desire that Dr. Geikie may be spared for many years to enjoy the satisfaction of well-earned repose.

Engrossed and signed by all the members of the Corporation, J. A. Temple, F. L. Grasett, W. T. Stewart, Charles Sheard, G. Sterling Ryerson, Luke Teskey, John L. Davison, G. A. Bingham, N. A. Powell and D. J. Gibb Wishart.

Dated June 14th, 1903.

# Correspondence.

## DR. W. B. GEIKIE'S LETTER OF RESIGNATION.

HOLYROOD VILLA,
52 Maitland St., July, 1903.

DEAR SIR,—I send you herewith a copy of my letter of withdrawal from my position as Dean of Trinity Medical College. It explains itself fully, and many of my friends desire to understand clearly the sole ground (for there was no other) which led me to take this step. I have always regarded amalgamation as extinction pure and simple, and could not therefore sanction it in the case of the Medical College to which I had given my best



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services for so many years of my life. I know also, that our students and graduates everywhere, feel as strongly as I do on this subject, for with myself they considered the College had in its two last calendars fully pledged itself as to its course on this subject. Yours faithfully,

WALTER B. GEIKIE.

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*To the Corporation of Trinity Medical College:*

GENTLEMEN,—As I find you are about to discuss the subject of the amalgamation of our Medical Faculty with that of another institution, I feel myself compelled with the greatest reluctance, and only from an imperative sense of duty, to send in my withdrawal from the position in the Faculty which I have so long had the honor to hold. As you are aware, I have been closely connected with it since its re-organization, at my own suggestion, early in 1871, and since then I have served the College with all the zeal and energy I possessed. For the long period of thirty-two years I have given ungrudgingly to my College duties quite two-thirds of my whole time, because the full success of the institution imperatively required me to do so.

For many reasons I was in perfect accord with the resolution recently adopted, that Trinity Medical College should now revert to her original position as the Medical Department of Trinity University, especially as was very wisely suggested by the Rev. Provost Macklem, that our College charter would continue to exist, and will be held by the Financial Board of the University, and that the Corporation will consist of the members of that Board and the medical members, as agreed upon. Thus governed, as the Medical Department of Trinity University, the College was, in my opinion, quite certain of a continuance of that success which she has most deservedly earned by many years of laborious, faithful, and successful teaching.

Closely connected with this proposition, and unanimously approved by the Corporation, and given to the press by members of the Financial Board of Trinity University, was the construction at an early date of such additional medical buildings as might be required, on sites close to our present College, near the General Hospital. These suggested changes, taken together, appeared to all of us exceedingly judicious, and well calculated to ensure the perpetuation of the Medical Department of Trinity University for generations, as well as to enhance in an ever-increasing degree its usefulness and success. Some unavoidable reasons have prevented this plan from being carried out at once.

Before, however, these arrangements had been in any degree

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completed, I find that negotiations are being undertaken of an entirely different character, having in view, not the perpetuation of a distinct Trinity Medical Faculty, and of the long-continued and phenomenal success which that Faculty has achieved during the more than three decades of its existence, but the bringing about an "amalgamation" of our Medical Faculty with that of another University.

Of this proposal I do not and cannot approve. It was mooted some time ago, and I was then, as now, strongly opposed to it, and I can truly say that all (for the exceptions are very few and far between) of our sixteen hundred medical graduates, and all the members of successive classes whom I have ever heard refer to amalgamation, are as much opposed to it as men can be, and I do not wonder at this, for they realise that amalgamation would mean, and must mean, no matter what terms may be offered, extinction only, both complete and prompt.

My *esprit de corps* at once rose against such a proposal. I could not bring myself by any effort, to entertain it. It so clashes with my sense of duty and of honor to my dear old College, and so conflicts with my common-sense when I think of the past success of so many, many years, and of the certainty of success in the immediate future, provided the proposed new buildings were only a little more than begun on the proposed sites (and this could easily be financed with the help actually promised to us), that I felt there was nothing left for me to do but simply to withdraw, as the only possible way of expressing my intense disappointment and disapproval of the "amalgamation" suggestion.

I know our graduates and students think as I do, as well as a very large section of the public, comprising all our true friends everywhere.

It was never proposed, so far as I know, to hand over our own charter to Trinity University, a charter obtained with so much labor (for I had that to do) and at a very considerable outlay, for the mere purpose of effecting an amalgamation of our Medical Faculty with that of the University of Toronto, and to hand it over in order to secure our own immediate and complete extinction as a teaching body. How can we, if we refer to the fly-leaf published in our Calendar and widely distributed for the past two years, proceed to take the very course we had expressly proclaimed ourselves as having finally and definitely decided against? (See Calendars for 1901-02 and 1902-03.) The fly-leaf and the present discussion of "amalgamation," if framed together, would be truly a curiosity. The plan which I, as well as all our students, expected our University and College to take, and in the approval of which we were

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unanimous, was that announced from the chair at the last Trinity University Convocation and published in all the papers, viz., to secure the complete welding of Trinity University and our Medical Faculty, and we very sincerely hoped and believed that we would shortly see a move made in the direction of building on the sites which had been approved of.

I beg to remind the members of the Corporation that in withdrawing solely because of the "amalgamation" question, I have taken no part whatever in it, and do not intend to do so.

As you are aware, gentlemen, I have certain legal vested rights in Trinity Medical College which the corporation will see to, as a matter of course, and secure to me.

However I may regret, and I do greatly regret, the present situation having been brought about, I cannot, as Dean of the Medical Faculty, do otherwise than take my present course, holding the views I do, in common with our graduates, our students, and that section of the public which has clung to us ever since our work began.

Faithfully yours,

WALTER B. GEIKIE.

HOLYROOD VILLA, 52 Maitland St.,
Toronto, June 4th, 1903.

## TRINITY UNIVERSITY, TORONTO.

*To the Graduates and Undergraduates in Medicine of Trinity University and to all the Students of Trinity Medical College:*

GENTLEMEN,—It is important that you should have a clear understanding of what steps have been taken by the authorities of the College and University towards the federation of Trinity University with the University of Toronto, and the amalgamation of the two medical faculties, and how such arrangements will effect those at present registered as students of Trinity Medical College.

With this object in view we have much pleasure in submitting to you the following statement, by which you will see that your interests have been carefully and zealously conserved, and that provision has been made for the completion of your medical course under the most favorable auspices.

As announced at the Medical Convocation last May arrangements were concluded whereby the faculty of Trinity Medical College became the Medical Faculty of Trinity University. One important feature of the changes proposed in this connection,

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was the erection of new buildings adjoining the present Trinity Medical College. While the details of this proposal were being worked out, it was strongly urged upon the authorities of the Medical College and of the University that the interests of all medical students in Toronto, both present and future, would be better served by co-operation with the Medical Faculty of the Provincial University, than by the perpetuation of two rival institutions in medicine. It was pointed out further, that the erection of the proposed building would necessarily mean the indefinite postponement of such co-operation, to the disadvantage of medical education generally and the weakening of both institutions. Accordingly the plans which had been commenced were postponed pending the full discussion of this important question, the result being an almost unanimous decision in favor of co-operation and the acceptance of the draft appended hereto for an amalgamated faculty in medicine, in which provision is made for every member of both faculties, with the exception of the former Dean of Trinity Medical College, who resigned his position during the course of these negotiations. We desire to take this opportunity of expressing our warm appreciation of the long, faithful and valuable services of Dr. Geikie, who has been such a power for good in our Medical College during the past thirty-three years. In this expression of appreciation we are sure every student of the College will join most heartily.

By reference to the subjoined list of the proposed amalgamated faculty you will at once see what excellent provision has been made for advancing the best interests of medical education in Toronto. It is generally acknowledged that such a faculty, possessing as it does, ability, strength and efficiency in medical teaching, will render signal service to the entire medical profession of the province, and we confidently anticipate that under the new conditions now created Toronto will more than ever occupy a proud and leading position among the educational centres of this Dominion and continent.

When not only the strength and efficiency of the new amalgamated faculty is considered, but also the excellent and ample provision for all branches of medical teaching in the now completed new medical buildings of the University of Toronto, and we reflect that before our new buildings could have been erected and equipped (in view more especially of the delay necessarily incident to the unsettled conditions of the labor market) most of the present students of Trinity Medical College would have been far advanced in their course, we feel confident that they will frankly recognize that their best interests have been served by the arrangements outlined in this letter.

As bearing more particularly upon the status of matriculants

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and the rights of non-matriculated students of Trinity Medical College, we beg to draw attention to the following provisions:

"*The non-matriculated students of Trinity Medical College shall be allowed two years from the date of federation for matriculating in Trinity University, under the regulations in force in that University at the time of federation.*

"*Those who have already matriculated, as well as those matriculating within the time specified above, will have the option of either proceeding to the degree of M.D., C.M., of Trinity University, on the conditions under which they entered, or proceeding to a M.D. degree in the following year, if desired, from the Provincial University. In both instances students will attend and receive lectures from the amalgamated faculty.*

"*All graduates in medicine of Trinity University will be enrolled in the Provincial University, and their names will appear in the various Calendars with their degrees designated.*"

As defining more clearly the status of graduates and undergraduates under federation we quote the following extract from the Articles of Agreement:

"All graduates and undergraduates of Trinity University, excepting those in theology, are, from and after the date of federation, to have and enjoy the same degrees, honors and status in the University of Toronto as they previously held in Trinity University, and shall be entitled, subject to the provisions of the University Act of 1901, to all the rights and privileges pertaining to such degrees and status so long as such federation continues."

*The Fellowship of Trinity Medical College (as the Medical Faculty of Trinity University) will be granted to such students as are now enrolled in Trinity Medical College upon their complying with the requirements and passing the examinations necessary to entitle them to receive such fellowship.*

The Corporation of Trinity Medical College and Trinity University wish their graduates and undergraduates to be clear upon the point that their interests, both now and for all time, have been most carefully safeguarded, and they will enjoy the same rights and privileges in the Provincial University, of which institution each one of them will under federation form an integral part, that they do now enjoy and have heretofore enjoyed as students and Graduates of Trinity University.

It is highly desirable that the students who have been in attendance at Trinity Medical College should register their names with Dr. Primrose, the Secretary of the Medical Faculty, Biological Department, Queen's Park, Toronto, *at as early a date as possible*, as seats in the lecture theatres are assigned according to priority of the date of registration.

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No fee will be required from students in the third and fourth years. Students of the second year will require to make a locker deposit of $2, and those in the first year the registration fee of $5.00, in addition to the locker deposit.

Signed on behalf of Trinity University,
T. C. S. MACKLEM, *Vice-Chancellor.*

Signed on behalf of Trinity Medical College,
J. A. TEMPLE, *Dean.*
CHAS. SHEARD, *Treasurer.*
D. J. GIBB WISHART, *Secretary.*

Toronto, July 27th, 1903.

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## PROFESSORS, LECTURERS AND DEMONSTRATORS.

### ANATOMY.

Professor and Director of the Anatomical Department: A. Primrose, M.D., C.M., Edin.

Associate-Professor: H. Wilberforce Aikins, B.A., M.B., Tor.

Demonstrator: C. B. Shuttleworth, M.D., C.M., Trin., F.R.C.S., Eng.

Assistant-Demonstrators: W. J. McCollum, M.B., Tor.; W. J. C. Malloch, B.A., M.B., Tor.; T. B. Richardson, M.D., C.M., Trin., F.R.C.S., Edin.; George Elliott, M.D., C.M., Trin.; C. P. Lusk, M.D., C.M., Trin.; S. W. Westman, M.B., Tor.; E. S. Ryerson, M.D., C.M., Trin.; E. R. Hooper, B.A., M.B., Tor.; W. J. Wilson, M.B., Tor.; A. C. Hendrick, M.A., M.B., Tor.; A. J. McKenzie, B.A., LL.B., M.B., Tor.; D. McGillivray, M.B, Tor.

### SURGERY.

Professors of Surgery and Clinical Surgery: I. H. Cameron, M.B., Tor., F.R.C.S. Eng.; F. LeM. Grasett, M.B., C.M., F.R.C.S., Edin.; G. A. Peters, M.B., F.R.C.S., Eng.; L. Teskey, M.D., C.M., Trin.

Associate-Professor of Clinical Surgery and Clinical Anatomy: G. A. Bingham, M.D., C.M., Trin., M.B., Tor.

Associate Professors of Clinical Surgery: A. Primrose, M.B., C.M., Edin.; N. A. Powell, M.D., C.M., Trin., M.D., Bellevue, N.Y.; W. Oldright, M.A., M.D., Tor.; H. A. Bruce, M.B., Tor., F.R.C.S., Eng.; F. N. G. Starr, M.B., Tor.

Associate-Professor of Clinical Surgery, in charge of Orthopedics: C. L. Starr, M.B., Tor.

Demonstrators of Clinical Surgery: W. McKeown, B.A., M.B, Tor.; C. A. Temple, M.D., C.M., Trin.; A. H. Garratt, M.D., C.M., Trin.; C. B. Shuttleworth, M.D., C.M., Trin., F.R.C.S., Eng.; T. B. Richardson, M.D., C.M., Trin., F.R.C.S., Edin.; J. F. Uren, M.D., C.M., Trin.

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PATHOLOGY.

Professor of Pathology and Bacteriology and Curator of the Museum and Laboratories: J. J. MacKenzie, B.A., M.B., Tor.

Professor of Clinical Pathology: H. B. Anderson, M.D., C.M., Trin.

Associate-Professor of Pathology and Bacteriology: J. A. Amyot, M.B., Tor.

Laboratory-Assistant in Bacteriology: T. D. Archibald, M.B., Tor.

Demonstrators: G. Silverthorn, M.B., Tor.; C. J. Wagner, M.B., Tor.

Assistant-Demonstrators: W. H. Pepler, M.D., C.M., Trin.; H. C. Parsons, B.A., M.D., C.M., Trin.; M. M. Crawford, M.B., Tor.; F. A. Clarkson, M.B., Tor.

MEDICINE.

Professor of Medicine and Clinical Medicine: A. McPhedran, M.B., Tor.

Associate-Professors of Medicine: J. T. Fotheringham, B.A., Tor., M.D.C.M., Trin.; R. D. Rudolf, M.D., C.M., Edin., M.R.C.P., Lond.

Professor of Clinical Medicine: J. L. Davison, B.A., Tor., M.D., C.M., Trin.

Associate-Professors of Clinical Medicine: A. M. Baines, M.D., C.M., Trin.; W. P. Caven, M.B., Tor.; W. B. Thistle, M.B., Tor.; J. T. Fotheringham, B.A., Tor., M.D., C.M., Trin.; A. R. Gordon, M.B., Tor.; R. J. Dwyer, M.B., Tor., M.R.C.P., Lond.; H. B. Anderson, M.D., C.M., Trin.

Associates in Clinical Medicine: G. Boyd, B.A., M.B., Tor.; R. D. Rudolf, M.D., C.M., Edin., M.R.C.P., Lond.; G. Chambers, B.A., M.B., Tor.; F. Fenton, M.D., C.M., Trin.; H. C. Parsons, B.A., M.D., C.M., Trin.; W. Goldie, M.B., Tor.

PREVENTIVE MEDICINE.

Professor of Preventive Medicine, Didactic and Clinical: C. Sheard, M.D., C.M., Trin.

MATERIA MEDICA AND THERAPEUTICS.

Professor of Materia Medica, Pharmacology and Therapeutics: J. M. MacCallum, B.A., M.B., Tor.

OBSTETRICS AND GYNECOLOGY.

Professor of Operative Obstetrics and Gynecology: J. A. Temple, M.D., C.M., McGill.

Professor of Obstetrics: A. H. Wright, B.A, M.B., Tor.

Professor of Gynecology: J. F. W. Ross, M.B., Tor.

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Associate-Professor of Obstetrics and Pediatrics: H. T. Machell, M.B., Tor.

Associate-Professor of Pediatrics: A. R. Baines, M.D., C.M., Trin.

Associates in Obstetrics: K. C. McIlwraith, M.B., Tor.; F. Fenton, M.D., C.M., Trin.

OPHTHALMOLOGY AND OTOLOGY.

Professors: R. A. Reeve, B.A., M.B., LL.D., Tor.; G. S. Ryerson, M.D., C.M., Trin.; G. H. Burnham, M.D., Tor., F.R.C.S., Edin.

Associates: C. Trow, M.D., C.M., Trin.; J. M. MacCallum, B.A., M.B., Tor.

LARYNGOLOGY AND RHINOLOGY.

Professor: G. R. McDonagh, M.B., Tor.

Associate-Professor: D. J. Gibb Wishart, B.A., Tor., M.D., C.M., McGill.

Associate: G. Boyd, B.A., M.B., Tor.

HYGIENE.

Professor: W. Oldright, M.A., M.B., Tor.

TOXICOLOGY.

Professor: W. H. Ellis, M.A., M.B., Tor.

MEDICAL JURISPRUDENCE.

Professor: N. A. Powell, M.D., C.M., Trin., M.D., Bellevue, N.Y.

MENTAL DISEASES.

Extra-Mural Professors: N. H. Beemer, M.B., Tor.; J. C. Mitchell, M.D., C.M., Trin.

CHEMISTRY.

Associate-Professor: W. T. Stuart, M.D., C.M., Trin., M.B., Tor.

BIOLOGY AND PHYSICS.

(As in Calendar).

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*To the Editor of* CANADIAN PRACTITIONER AND REVIEW:

DEAR SIR,—Some months ago a communication from me was published in the PRACTITIONER protesting against sending consumptives to Muskoka, because of the moist atmosphere there. It may be remembered that, in that communication it was stated that Muskoka is a very desirable place, especially in

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June, July and August; and I may now add, in September and October, and indeed always, for the overworked, overworried, worn-out neurotics, for persons generally run down, for those seeking rest or pleasure—a most desirable place, indeed for these, requiring quite a different atmosphere from that best suited to the consumptive. In justice to that picturesque locality, in many respects highly favored as it is—with its beautiful islands, lovely lakes, and many places for good living and recreation—and in justice to its people, will you kindly permit me to add, having, as before stated, studied a little for many years the meteorological conditions of a large number of localities, I know of no place more suitable for nearly all such persons as above indicated—the overworked, etc., for whom a somewhat moist, balmy atmosphere is indicated, being soothing, and usually much more desirable than a dry, stimulating one. And it might interest not a few of your readers, and you have some amongst our southern neighbors, to learn from "one who has been there," that when coming to Muskoka or Toronto, and desire a sort of "milky-way" trip—not milky in the sense of tame or spiritless, but in a true life-giving and sustaining, in that of a galaxy—with most beautiful, most grand scenery, and with everypossible facility for seeing it and viewing it, they can secure this from New York, on the Lehigh Valley Railroad, in its Black Diamond Express; so also can our Canadian friends on going South or to New York.

EDWARD PLAYTER.

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Dr. Bruce Riordan, of Toronto, returned July 28th from a trip through the Maritime Provinces.

Dr. Samuel C. Corbett, of Winnipeg, passed through Toronto July 20th on a visit to Port Hope.

Dr. W. B. Thistle, of Toronto, has nearly recovered from his attack of typhoid fever.

Dr. H. B. Anderson, of Toronto, is slowly recovering from a mild attack of typhoid fever.

Dr. H. W. Spence (Tor. '99), after an absence of three years from Toronto, returned July 1st.

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ADDRESS,

J. ARTHUR JACKSON, M.D., Secretary Box 1864.


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# Book Reviews.

**The Medical Treatment of Gall Stones.** By J. H. KEAY, M.A., M.D. London: Rebman Limited, 129 Shaftesbury Avenue, W.C. 1902. Toronto: C. E. Wingate, 186 Adelaide St. W.

**Portfolio of Dermochromer.** By PROF. JACOBI FREIBURG, Germany. English adaptation of text by I. I. PRINGLE, M.B., F.R.C.P., Physician to the Department for Diseases of the Skin at the Middlesex Hospital, London; in two parts. London and New York: Rebman Limited. Toronto: C.E. Wingate, 186 Adelaide St. W., Canadian Representative.

**Introduction to the Study of Malarial Diseases.** By DR. REINHOLD RUGE of the Imperial German Navy. Translated by P. Edgar, M.B., C.M. (Edin.), District Surgeon,; Teluk Anson, F.M.S., and M. Eden Paul, M.B. (Brux.), M.R.C.S., L.R.C.P. London: Rebman Limited, 129 Shaftesbury Avenue, Cambridge Circus, W.C. 1903. Toronto: C. E. Wingate, 186 Adelaide St. W.

**Guide to the Microscopic Examination of the Eye.** By PROF. R. GREEFF, Surgeon to the Ophthalmic Department of the Royal Charité Hospital, Berlin. Translated from the second German edition by HUGH WALKER, M.A., M.B., C.M., Assistant Surgeon and Pathologist to the Ophthalmic Department of the Glascow Royal Infirmary. London: Rebman Limited, 129 Shaftesbury Avenue, W.C. 1901. Toronto: C. E. Wingate, 186 Adelaide St. W.

**High-Frequency Currents in the Treatment of Some Diseases.** By CHISHOLM WILLIAMS, F.R.C.S. (Edin.), Member of the Royal College of Surgeons (Eng.); Licentiate Royal College of Physicians (Lond.); Licentiate Society of Apothecaries (Lond.); Electro-Therapeutist, West London Hospital (W.); Surgeon Out-Patients City Orthopedic Hospital (E.C.); Honorary Secretary British Electro-Therapeutic Society, etc. London: Rebman Limited, 129 Shaftesbury Avenue, Cambridge Circus, W.C. 1903. Toronto: C. E. Wingate, 186 Adelaide St. W.

**The Treatment of Tabletic Ataxia by Means of Systematic Exercise.** An Exposition of the Principles and Practice of Compensatory Movement Treatment. By DR. H. S. FRENKEL, Medical Superintendent of the Sanatorium "Freihof" in Heiden (Switzerland). Only authorized English edition. Translated and edited by L. FREYBERGER, M.D. (Vienna), M.R.C.P. (Lond.), M.R.C.S. (Eng.), Hon. Physician to the St. Pancras and Northern Dispensary; Pathologist to the Great Northern Central Hospital; late Clinical Assistant to the Hospital for Sick Children, Great Ormond Street, etc., etc. With 132 illustrations. London: Rebman Limited, 129 Shaftesbury Avenue, Cambridge Circus, W.C. 1902. Toronto: C. E. Wingate, 186 Adelaide St. W.

**Reference Chart of Diseases of Nervous System and Muscles.** By EDWARD CURTIS HILL, M.Sc., M.D., Member of the Faculty of the Denver and Gross College of Medicine and Medical Department University of Denver.

The above chart is published by that enterprising company, The Antikamnia Chemical Company, St. Louis, and sent gratis by them to the physicians of America. It is a most useful chart for ready reference and enables one to review the many symptoms in nervous disorder into a differential diagnosis by comparison. It will be sent for the asking, and unlike many free gifts, is an exceedingly valuable one.

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**The Office Treatment of Rectal Diseases Explained and Simplified.** Being an Exposition of the Treatment of all those Diseases, both Medical and Surgical, of the Rectum, Anus and Sigmoid Flexure, Cure of which may be Accomplished without Surgical Anesthesia. By RUFUS D. MASON, M.D., Omaha, Nebraska, Professor of Rectal and Pelvic Surgery to St. Joseph Hospital, Member of the American Medical Association, Medical Society of the Missouri Valley, Nebraska State Medical Society, Omaha Medical Society, American Proctologic Society, etc. Illustrated. Second Edition. The Review Press, Lincoln, Nebraska. 1901.

We have received this little volume, and have read it with much satisfaction. It is a concise résumé of the author's practice. He places the subject before his readers in terse language. and his deductions are all the result of practical experience, With a class of diseases that is so common the general practitioner cannot be too familiar, and any method that will aid him in relieving them, without major operative interference, should be welcomed. This little volume is one that will be found exceedingly useful.

**Biographic Clinics.** The Origin of the Ill-Health of De Quincey, Carlyle, Darwin, Huxley and Browning. By GEORGE M. GOULD, M.D., Editor of *American Medicine*, Author of "An Illustrated Dictionary of Medicine, Biology," etc.; "Borderland Studies"; "The Meaning and Method of Life," etc. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut Street. 1903.

It is always a pleasure to read anything from the pen of George M. Gould. We may not always agree with him, but we must always appreciate his earnestness and his thorough grasp of the subject in hand. He has undertaken to explain the idiosyncrasies and peculiarities in the lives of De Quincey, Carlyle, Darwin, Huxley and Browning, by showing that they suffered from disease of the eyes that was not recognized, and consequently no attempt made at correcting them. He believes that if their eye conditions had been corrected the great work done by each would have been much better done, that their lives would have been lengthened and more and greater work accomplished. This is a volume, the perusal of which will more than repay the time spent. It is not a medical treatise in the true sense, but an analysis of the condition of these eminent authors by a minutely dissecting mind, a trained physician who is able to see far through their peculiarities and recognize the cause and suggest the remedy—even more, point out these oversights so clearly that others may recognize them and their patients be saved similar fates.

The concluding chapters, "Biliousness and Headaches," "Some Neglected Points in the Physiology of Vision," are more than worth the price of the volume. Any practitioner will be better for having read the work. It should reach a large sale.

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# Miscellaneous.

## Summer Complaint.

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## Melancholia, Insomnia and General Lowering of Nerve Power.

In a very forceful and exceedingly interesting paper on this subject, published in the *Cincinnati Lancet-Clinic*, Dr. T. D. Fink, of Louisville, Ky., writes the following: "I am convinced that there is no other remedy so useful and attended with such satisfactory results in the treatment of melancholia with vasomotor disturbances, anemic headache, emotional distress, and active delusions of apprehension and distrust as Antikamnia Tablets. These tablets also increase the appetite and arterial tension, promote digestion, and are particularly serviceable in relieving the persistent headache which accompanies nervous asthenia. In neurasthenia, in mild hysteroid affections, in the various neuralgias, particularly ovarian, and in the nervous tremor so often seen in confirmed drunkards, they are of peculiar service. Patients who suffer from irritable or weak heart, needing at times an analgesic, can take them without untoward after-effects, knowing that the heart is being fortified. In delirium tremens, they relieve when there is great restlessness with insomnia and general lowering of the nerve power. The pain of locomotor-ataxia yields to treatment with Antikamnia Tablets in a remarkable degree, their analgesic power being of a peculiar kind, in that they will relieve painful affections due to pathological conditions of the peripheral nerves, as neuritis, etc., also lumbago, sciatica and myalgia. In chronic catarrh of the stomach, with its often accompanying headaches, in cardiac dropsy and in ascites, they are of decided benefit."

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, SEPTEMBER, 1903. NO. 9

## Original Communications.

### THERAPEUTICS OF ARTERIO-SCLEROSIS.

By JOHN L. DAVISON, B.A., M.D.C.M., M.R.C.S. Eng.
Professor of Clinical Medicine, Trinity Medical College.

An imperfect supply of arterial blood is so universally harmful to the animal economy, and so far-reaching in its effects, that the possible alleviation, or cure of a disease of the arteries, upon the integrity of which depends the blood supply to every part, can only be considered as of the greatest importance. Accidents and infections barred, death generally comes through arterio-sclerosis.

To begin at the beginning, I hold that young persons of both sexes should be taught that over-exercise is just as baneful, in a different way, of course, as under-exercise. As to the latter, there are not many children who do not play naturally, as the lambs do; and the tendency in civilized nations with highly differentiated sports, is altogether in the direction of over-exercise. True, in early youth and adolescence, the safety valves are in such excellent condition, that even a certain amount of abuse of the machine-engine seems to leave no permanent impairment. But too often the mechanism is taxed beyond what even young healthy flesh and blood can bear without injury. The spur of competition in games among the young men of to-day leads to a strain, especially of the heart and arteries, which makes itself felt, not only at the time, but all through life. Just as alchohol acts, partly by exciting too strong action of the heart, so undue, prolonged or severe exercise induces sclerotic changes in the arteries; and young athletes are "old men" as to their arteries by the time they are twenty-five. Life insurance companies look with disfavor on athletes as applicants for whole-life policies, knowing that often



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in the dust of the arena is laid the foundation of future and early disease of the organs of circulation, with the inevitable shortening of the expectation of life. A case in point: Not long ago a young man, a school teacher, aged twenty-three, applied for life insurance. It fell to me to examine, and—decline him. He could not realise that he was not a gilt-edged risk. He was a power on the football field, and a well-known A1 amateur athlete. But, heredity aiding perhaps, he was about sixty or sixty-five years old according to Cazalas' rule, though he had seen only twenty-three summers. Indeed, I have examined many men of fifty-five or sixty whose arteries were younger than his were.

I need not enumerate the signs: hypertrophied heart; tortuous and degenerate arteries; displaced apex beat; accentuated second sound, *et al.* They have all been enumerated. Such persons are hard to treat. It requires time, tact and patience to get them to understand that they are not what they have always thought themselves, "in the pink of condition;" and accidents barred, reasonably sure of a long active life. Pity it is, also, that the young men who thus cripple themselves in early life are the ones who have the most pluck, stamina, earnestness and energy, and should therefore, make the best, and most progressive and useful citizens.

So much, in brief, for prophylaxis in the early period of life, when the abundant energy overdoes the natural instinct of the young animal to play. We now naturally come to the consideration of over-work in the ordinary affairs of life. The fact that men especially, and not a few women, habitually overwork themselves is patent to every physician. The expression, "The Strenuous Life" has become trite, even in its short life, but it expresses exactly the condition under which a great majority of persons, living under the newer civilization, exist. Constant teaching is needed to impress the truth upon them that the strenuous life kills early. Even when the truth is borne in upon the combatants, the struggle goes on as fiercely as ever. Here and there *one* has sense enough to realize that wealth, titles, office decorations, etc., without health are not to be desired; and that the sheltered life is the one which makes for the true happiness of the individual. That John Tompkins with a good digestion is really happier than Jay Gould with apepsia.

The temperament, of course, has much to do with arterio-sclerosis. The slow-moving, phlegmatic individual does not weaken and exhaust his nervous force by allowing trifling irritations to produce great activity, and thus wear out the circulatory apparatus; while the active, sanguine, nervous man puts his heart and blood-vessels to do superfluous, and, for the

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most part, purposeless work, inducing early senescence. So a part of your duty will be to teach your patient to cultivate the *festina lente*, the cheerful habit of mind, contentment, and self control. I have said enough to direct your attention to the duty you owe to your patients and fellow-citizens, in speaking in season and out of season, against the fierce struggle for wealth and supremacy. The millions may come (not, however, to many, though the struggle be for all) but with little power to enjoy them.

*Temperance.*—It is given to few persons to have the natural, normal balance, which causes them to lead temperate lives. We have been accustomed to think of temperance, as the very limited use, or total abstinence from alcohol. Now, while no body of men have more reason to dep ore that terrible scourge—the abuse of alcohol—than physicians have, so also no other body should so fully realize that temperance runs along other lines than abstinence from whiskey consumption. Intoxications take place from too much nitrogenous food, from constipation, from mental worry, from over-work, from tobacco, because of a jaded and worn-out nervous system, from the exigencies of social life, etc.

I do not speak of uric acid, that scape-goat in medicine, which some of our brethren used to demonstrate to admiring patients in their blood, by means of a pocket lens. Recent investigations discredits this product entirely as the causative agent in gout, and so in arterio-sclerosis. In the *Lancet* of January, 1903, Professor Woods Hutchinson shows "that uric acid is no longer regarded as a product of the improper combustion of proteids into urea"—also, "that uric acid is innocuous, and that variations in its excretion are purely symptomatic." This is a blow to many a practitioner who gives uric acid as a cause for hosts of complaints, for which the pathology is nebulous, from ingrowing toe-nail to appendicitis; all going to show that we still, as in the days of Job, "darken counsel by words without knowledge."

I fear that there is much intemperance of a sexual nature; and that sexual neurasthenia is quite common, both among men and women. At any rate we know that intemperance along any line tends to arterio-sclerosis; here, again, prophylaxis is of much more importance than drugging.

I need proceed no further in this direction, having briefly called your attention to the necessity of practising temperance in every phase of life, if the sum of the years is to be complete, and the machine to do its best work to the end of the chapter.

To speak more definitely, let me urge that the patient suffering from this disease should live a quiet, well-regulated life, and avoid excess in everything—eating, drinking, pleasure

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and excitement of all kinds. Alcohol should, in my opinion, be entirely interdicted, though some physicians think light wines may be allowed. I would like to say, that in the vast majority of cases where the patient takes a stimulant, it is the alcohol he is after, and not the particular flavor which he may enjoy, more or less, and it is the alcohol that does the injury, whether it be in the guise of beer, wines, spirits or liqueurs. I do not deny that the use of light wines is less injurious than that of heavy spirits, but the difference is largely due to the diminished amount of alcohol taken.

As to food, it should be light and easily digested, so that no irritating products formed from decomposition of meat nutrition, whether uric acid or xanthin bases, or poisonous ptomanies, shall act upon the vessel walls, stimulating them to proliferative processes, or anatomically injuring them, as do lead, ergotin, etc.

Rumpf advocates a diet low in lime salts. His suggestion is one which does not include milk. It is: Meat, 250 grm.; potatoes, 100 grm.; bread, 100 grm.; fruit, 100 grm.; fish, 100 grm.; along with butter and sugar. The patient may take vegetables instead of fruit, but is not allowed cheese, eggs, rice or spinach. This diet contains ten times less lime salts than a meat diet. He allows only distilled or boiled water as a beverage. It would seem that this plan of Rumpf's is reasonable, if the arteries show signs of calcification, but arterio-sclerosis is not necessarily calcification, and so every case could not come under this line of treatment. It has been observed that certain diseases, notably epilepsy and arterio-sclerosis, are rare, if not quite absent in herbivorous animals. The hint is taken, and I believe with good results, in respect to the treatment of epilepsy. Why should it not be taken in regard to arterio-sclerosis, and a vegetable diet prove equally prophylactic and curative as in epilepsy? Unfortunately, the large ingestion of vegetables would tend to the deposition of lime salts. So it seems that there is no rule that will apply to all cases and at all stages, except this one: Less food, and of a bland unirritating character, easily digested; in other words, temperance again in the matter of food.

*Now, as to Syphilis.*—May I say that I think a symposium at some future meeting of this society on the old subject of enthetic disease would be productive of much benefit. We all see syphilis mentioned constantly, as present among us, and as causative of many and varied lesions, especially of the nervous system. But I think a heresy has crept in during the past two decades as to the necessary treatment of this disease. Owing to imperfect therapeutics, the awful effects of syphilis show years after, and I have no doubt that every one who hears me

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has seen pitiable cases of ruined lives which might have been spared as useful and happy ones had the necessary care and time been taken in the early treatment of the disease. By early treatment I mean that of the first three years after infection. The heresy, to my mind, is that Jonathan Hutchinson's old rule of three years of mercury and iodide of potash; then six months of iodide of potash; then, no signs, marriage allowed, has been abridged with deplorable results, both to patient, his wife and offspring.

Of course, the therapeutics of syphilitic arterio-sclerosis are the therapeutics of syphilis. I might as well say here, that the drug treatment of the syphilitic process necessitates the free use of mercury, preferably by inunction, and iodide of potash internally.

When a patient gets near the end of the chain the question often arises as to spas and mountain air, etc. I can only say that there is a great volume of testimony regarding the benefits which arise from such treatment. I have known of at least one case of angina pectoris, which was given up by specialists in New York City, recover a fair amount of comfort, with an additional margin of life, by a stay at Bad Nauheim, with graduated exercises, and modified Schott movements. The question is too large to enter upon here, but if I ever have a case of arterio-sclerosis which seems absolutely hopeless, I shall recommend Nauheim, if the purse will allow.

*Altitude.*—Generally speaking, persons suffering from arterio-sclerosis do not do well at even a moderate elevation, and all high elevations are positively dangerous.

I cannot enter upon even an enumeration of the remedies and methods of treatment for arterio-sclerosis of the brain, heart, kidneys, etc., which, while pertinent to my subject, properly belongs to treatment of diseases of these organs, respectively. It is left to me to say a few words as to the drug treatment of arterio-sclerosis *per se*.

And, fortunately for your patience, there is but one class to which I need refer, viz., the iodides. It would be interesting to be able to say why and how these remedies give such good results, but with our present knowledge we must be content to use them empirically, nothing doubting that their long-continued use will result in good to the patient.

Lauder Brunton, in his lectures on "The Action of Medicines," a most admirable and helpful work, let me say, something after the style of Fothergill's masterpiece of book-teaching, his "Hand-book of Treatment," has two or three pages which are worth being committed to memory in this connection. He shows that iodide of potash given continually for months and years for other diseases, such as rheumatism and stiffened

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joints, effects wonderful changes in the arteries. He also shows the very beneficial effects of baths and massage in the same direction.

These iodides, the "medicines of the arteries," as they are called, must be exhibited for long periods of time, in order that their beneficial effects may be seen. When the potash salt unduly reduces the heart's action the sodium salt may be used. They should be given in fairly large, but not heroic doses, say ten or twenty grains well diluted before meals. Milk forms a very suitable vehicle for their administration. Some practitioners prefer tincture of iodine in doses of ten minims in sweetened water before each meal. The advantage of the tincture is said to be that "the iodine selects its own basis and thus in no way irritates the stomach or degenerates the body."

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## THE CARDIAC ASPECT OF ARTERIO-SCLEROSIS.*

By Dr. T. W. G. McKAY, Oshawa.

The changes to be considered are:

1. Compensatory hypertrophy without and with dilatation.
2. Dilatation and failure of compensation.
3. Pathological conditions in the *(a)* coronary arteries, *(b)* myocardium, *(c)* endocardium. These are all more or less independent.
4. Disturbed cardiac innervation.

*Compensation.*—Efficient compensation and good health may exist for years and present no symptoms.

It is the natural result of cardiac response by means of muscular hypertrophy, to the stress induced by the peripheral resistance following the toxic arterial spasm and increased functional activity of the heart. It is best marked in younger, vigorous adults or the well-developed middle-aged. They show on examination a full, regular, strong, sustained high-tension pulse of normal rate and no apparent thickening. The enlarged heart is indicated by heaving precordial impulse, displacement of the apex beat downwards and outwards, increased percussion dulness, prolonged first sound on auscultation and a clear ringing and accentuated second sound, particularly over the aortic area.

In more advanced cases arterial thickening and associated myocardial and endocardial changes are to be found. The preliminary change in the left ventricle is followed by hypertrophy in the left auricle and also in the right ventricle

* Read at meeting of Ontario Medical Association.

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and auricle, the signs of enlargement increase and the impulse becomes heavy and more forcible. The pulmonic second sound is accentuated.

As dilatation overcomes hypertrophy, the cardiac impulse becomes lessened in rate and the tension lowered. The first sound of the heart is shortened and sharpened. Complaints are now heard of headache, tiredness, coldness, numbness and tingling of the extremity, noises in the ears, dizziness and gastro-intestinal disturbances. There is an increased flow of urine of a low specific gravity and containing traces of albumen. Ruddiness gives place to pallor, robustness and corpulence to a loose flabby fat. Anemia becomes marked. This condition demands prompt hygienic and tonic treatment.

Failing compensation is marked by weakness, dyspnea, precordial distress, vertigo, loss of consciousness, irritability, convulsions and insomnia. The heart is still more dilated, its action becomes weak and irregular and may be accompanied by to-and-fro soft valvular murmurs due to relative incompetence. These must not be mistaken for murmurs due to endocardial lesions, which may also be present. Nutrition fails rapidly. The patient becomes sallow, emaciated and cachectic. The urine becomes scanty and high colored. The pulse is rapid, irregular and intermitting. Lividity and breathlessness on slight exertion, congestions of the internal viscera, edema of legs, edema of lungs, cardiac asthma, laryngeal cough and rusty, frothy or albuminous sputum, hemorrhages, hypostasis—all indicate the gravity of the condition.

In long-standing cases emphysema and fibrosis of the lungs are found. Death is frequent from hypostatic pneumonia and in the more acute cases from syncope and sudden death. The heart is dilated in all directions, its impulse may be seen and not felt. There is marked epigastric pulsation, venous congestion and pulsation; fetal and gallop rhythm of the heart may be found. The prognosis is very grave. Treatment in milder cases is cardiac stimulation; in severe cases with marked lividity and urgent dyspnea venesection.

Changes in the coronary arteries give rise to:

1. Embolism, which is very rare, and not diagnosable.
2. Aneurysm, which is also extremely rare.
3. Coronary endarteritis, which is one of the commonest manifestations of arterio-sclerosis. It leads to defective nutrition and degenerative changes in the myocardium.
4. Thrombosis is due to coronary endarteritis. It gives rise to anemic infarct, fatty degeneration and slow fibroid change. It is a frequent cause of angina pectoris, rapid heart failure and sudden death.

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Myocardial changes:

1. Aneurysm of the heart is rare and hard to diagnose. It interfers with the mechanical action of the heart. It is generally in the left ventricle and follows fibroid myocarditis. Rupture occurs into the pericardium and causes instant death.

2. Fatty infiltration follows along the coronaries and their branches, interfering chiefly with the mechanical action of the heart. It occurs in stout, plethoric, middle-aged, luxury-loving individuals who live too well and exhibit defective elimination. It gives rise to no special symptoms except those of a weak heart. The heart is usually enlarged, dilated and relaxed. The prognosis is good unless complications set in. Such cases do good under hygienic gymnastic and Spa treatment.

3. Fatty degeneration is usually allied more or less with fibroid infiltration. It is insidious in its onset. The muscle elements undergo hyaline degeneration, fatty change and atrophy. Connective tissue infiltration of a conservative character to maintain the resistance of the heart-wall follows after. Once established there is no tendency to return to a healthy condition. The subjects of it are usually middle-aged and out of the male sex. The symptoms are those of a dilating heart. The heart is enlarged and flabby and relaxed, and its substance friable. Over-exertion induces syncopal and anginal attacks; later on these occur at night. There may be Cheyne-Stokes symptoms. The prognosis is very grave. Treatment is mostly palliative, dietetic, hygienic and massage, with tonics such as iron, arsenic, strychnine and oxygen, carminative stimulants and heart tonics in emergency cases.

4. Fibroid infiltration, fibroid myocarditis is the commonest and most important of the arterio-sclerotic lesions. Generally associated with hypertrophy, it may be either general or local. Its follows coronary obstruction and chronic congestion of the heart and indicates attempts at repair. The heart muscle atrophies and fibroid-infiltration occurs. The chambers are dilated, their walls thickened, their resilience and contractile power diminished. There is a gradual failing of compensation and often other associated degenerative changes. Sudden death or angina pectoris may be the first manifestations of the presence of the condition. Like fatty infiltration it occurs mostly in middle-aged people or those over fifty and most often in males. The signs and symptoms are those of failing compensation. Frequent attacks of gastralgia have a grave significance. Signs of emphysema or chronic Bright's or arterial degeneration are always present. In advanced elderly cases slow pulse (20 to 40 beats to the minute) with syncope, epileptiform and apoplectiform attacks (the Stokes-Adams

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syndrome) are to be found. The arteries are thickened, palpable and firm, the pulse regular at times but more often slow and of irregular force and rhythm. When secondary to mitral disease and emphysema it is feeble, changeable and compressible. The heart is enlarged in all directions; its beats less forcible and more diffuse than in pure hypertrophy. The first sound is longer, duller and rarely heard at the base. The second sound is dull, muffled and prolonged. The prognosis is grave. Treatment is as for fatty degeneration, with the use of nitro-glycerine.

Endocardial changes:

1. Aortic changes are due to valvulitis, fibrosis, contractions and adhesions of the valve segments. The changes are most marked at the points of contract and the attachment to the fibrous ring of the aortic opening, and are induced by dilatation of the aorta, high tension, disordered cardiac nutrition and involvement of the coronaries.

(*a*) Aortic stenosis is diagnosed by a harsh, rough, sawing systolic murmur associated with cardiac thrill and hypertrophy and a small, slow, sustained pulse of fairly high tension. It occurs usually in older people. In simple cases the prognosis is good. Life may be long. Death results from exhaustion of the ventricle and syncope, or degeneration and asystole. It is usually associated with aortic regurgitation.

(*b*) Aortic regurgitation may be primary, following atheromatous and dilated aorta or due to relaxation in aortic stenosis. It comes on gradually and is usually found in younger or middle-aged people and accompanied by a murmur of relative stenosis. There is a great hypertrophy of the left ventricle, a diastolic murmur traceable to the aortic valve, throbbing arteries and Corrigan's water-hammer pulse. The prognosis is graver than in all other valvular troubles and angina is common. Cerebral embolism may occur. It leads sooner or later to dilatation and mitral insufficiency.

2. Mitral disease is due to increased ventricular pressure following circulatory obstruction and relaxation of an overworked degenerating heart muscle. It also follows degenerative changes in the cords and papillary muscles and valves and the fibrous ring of the opening.

(*a*) Mitral regurgitation is the common result of all conditions which prevent a proper closure of the valve. Once the equilibrium is established it may persist for years The signs are a mitral systolic murmur transmitted to the left and heard posteriorly, accentuated pulmonic second sound and hypertrophy of both sides of the heart. The pulse is small, of low tension and often dicrotic. The inevitable outcome is dilatation and its consequences.

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(*b*) Mitral stenosis is due to contractions and adhesions of the valves and degenerations in the neighboring wall of the venticle. It induces marked dilatation and hypertrophy of the left auricle, right ventricle and auricle, and causes pulmonary congestion. The signs are presystolic thrill and murmur of a churning character, hypertrophied right heart, the left heart normal in size, and accentuated pulmonic second sound. The prognosis is unfavorable Failure of compensation is the result of this lesion.

3. Pulmonary incompetence is exceedingly rare.

4. Tricuspid incompetence may be temporary, to relieve a laboring heart, or permanent. It is a common sequence of aortic stenosis, mitral incompetence and aortic regurgitation. The signs are systolic pulsation in the jugulars, swollen and pulsating liver, a soft, low, systolic murmur over the lower end of the sternum, accentuated pulmonic second sound, increased cardiac dulness to the right of the sternum, epigastric pulsation and cardiac failure. The prognosis is bad. The treatment of all valvular troubles is to maintain the maximum of compensation.

5. Thrombi in the left ventricle may cause systemic emboli in the right ventricle; they give rise to pulmonary apoplexy and infarcts.

6. Ulceration of chronically diseased valves may give rise to malignant endocarditis manifested by rigors, fevers, chills, sweats, cardiac pain, sense of oppression, shortness of breath and embolism. The prognosis is very grave.

*The Senile Heart.*—The heart is small, not necessarily hypertrophied, pigmented, fatty or atrophic. It shows brown atrophy.

The arteries are tortuous, stiff and rigid. The patients are emaciated, sallow, anemic and cachectic, with arcus senilis. The heart is small and its action weak. The pulse is small, rapid; it may be slow, at times irregular and intermitting. Syncope is common. The treatment is mainly stimulants for the acute attack.

*Angina Pectoris.*—This symptom-group is induced by all such cases as increase cardiac embarrassment by constricting arterioles, by local cramp of the muscle and by stretching or compression of the cardiac plexus. Fatty degeneration and mitral regurgitation tend to relieve the tendency towards it. It is least dangerous in fatty infiltration and gravest in aortic regurgitation, atheroma, fibroid degeneration and aortic and mitral spasm. It is characterized by intense, agonizing constricting precordial pain. In mild attacks it may be only dull and oppressing. In severer attacks the pain radiates down the inside of the left arm to the fingers, to the sternum, to the intrascapular region, to the side of the chest and at times to the

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right arm. The face is pale, anxious and ashy, and covered by a cold beady sweat. The lips are livid. The patient at times is restless, but more often quiet. The pulse may be small, hard, thready and irregular; nearly normal in rate or slowed. The heart sounds are feeble, distant and valvular. The attack lasts only a few seconds or minutes and subsides. It may recur successively. Death may occur at the height of the attack or by faint and syncope. Relief is accompanied by eructations of gas, flatulence, passages of large quantities of urine and exhaustation. Treatment: First, from the paroxysm, by amylnitrite, nitroglycerine and morphia, followed by stimulants and carminatives, if needed; secondarily, iodine of potash, arsenic, etc., as the cardiac state requires.

## EYE SYMPTOMS IN ARTERIO-SCLEROSIS.

By J. CAMERON CONNELL, M.D., Kingston.

Changes in the retinal vessels as a result of arterio-sclerosis are seen with comparative infrequency, though they are not so rare as was formerly supposed. Raehlman found visible changes in twenty-four out of forty-four cases of arterio-sclerosis. Disturbance of function is not always present, and, in the absence of subjective eye symptoms, no doubt many cases escape observation. When vision is affected the reduction varies from slight fogginess to complete binocular blindness.

The changes to be seen by the ophthalmoscope are: (1) Pulsation of arteries and veins. (2) Tortuosity and attenuation of the vessels; (3) white streaks along the margins of the larger vessels; (4) hemorrhages; (5) rarely, a beaded appearance of the smaller vessels is seen, due to the formation of small aneurisms.

The third symptom mentioned—the formation of white streaks or lines along the margins of the larger vessels—is thought to be pathognomonic of senile arterio-sclerosis. It may, however, be very difficult to differentiate this from the somewhat similar appearances which follow neuro-retinitis. In the latter condition, however, the calibre of the vessels is not usually constricted as it is in arterio-sclerosis.

Pulsation of the vessels is most likely to be seen early in the course of the disease when the arterial tension is high. Several varieties of abnormal pulsation are seen, but the most common resembles a rhythmic wave, beginning at the papilla and spreading out over the retina. The pulsation is produced by a difference between the intraocular tension and the general

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arterial tension. The most marked cases of pulsation I have seen have been associated with aortic insufficiency.

Tortuosity of the vessels is most noticeable at points where vein and artery cross, and it is at these points that hemorrhages most frequently occur, and that the pathological processes are most marked. Lateral displacements and flexions are more common than real changes in calibre.

The changes in the retinal vessels consist of connective tissue formations complicated with degenerative processes which affect the intima and result in thick, rigid vessel-walls. The media is thinned and shows hyaline degeneration, while the adventitia is thickened. The smaller vessels show greater changes proportionately than the larger ones. Constriction is present in those portions of a vessel which remain hard, and where softening takes place the walls yields and forms an aneurism. This process in the veins causes a spindle-shaped varicose appearance.

All these conditions are present more frequently and extensively in the choroid, but their demonstration is rarely possible with the ophthalmoscope.

Bader describes the process as a thickening of the walls of the small arteries of the retina and choroid by a homogeneous, strongly reflecting, not quite transparent substance. Consequent upon these alterations in the arteries and upon the hemorrhages, are degenerative changes, fatty degeneration of nerve fibres, infiltration with round cells and separation of the fibres by hyaline fibroid material. This explains the loss of vision.

Hemorrhages, both flame-shaped and irregular, may occur at any stage. The larger hemorrhages are likely to be at points where the veins and arteries cross, as already stated; the smaller flame-shaped ones at any point in the nerve fibre layer of the retina.

Several cases in elderly people have come under my notice in which small sub-conjunctival hemorrhages, developing without apparent cause, have been the immediate reason for the consultation. The conjunctival lesion appeared trifling, but examination of the fundus showed an advanced arterio-sclerosis. One of these patients died suddenly a short time ago while taking a cold bath.

The recognition of arterio-sclerosis of the retina is of value, as it indicates similar disease of the cerebral vessels. This indication may be regarded as positive even when the vessels of the general circulation are apparently unaffected.

To the oculist the information is important as it affects the indications for treatment of concurrent eye lesions and the prognosis in operations.

My experience also leads me to believe that epistaxis in old

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people, without apparent cause or after violent emotion, must be regarded as a symptom of incipient arterio-sclerosis, *i.e.*, it occurs in the pre-sclerotic stage when the only recognizable symptom may be the heightened arterial pressure. Later on the attacks diminish in frequency, when there is lowered blood pressure and lessened cardiac activity.

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## CEREBRAL ASPECT OF ARTERIO SCLEROSIS.

By H. A. McCALLUM, M.D., M.R.C.P. (Lond.)
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Physicians of the past generation had spoken of arterio-sclerosis under the head of "brain softening." When attributing this condition to arterio-sclerosis with its accidents one must not forget that defective metabolism and altered blood are precedent conditions or causes and their destructive process may be as readily spent upon the parenchyma of organs as upon vessel walls. Alterations in the cerebral neurons arising from the same cause as arterio-sclerosis may keep pace with the changes in the arterial wall. This is to be kept in mind as an explanation of the mental and sensory symptoms found in the early and late stages of arterio-sclerosis. So many theories in medicine based upon the cardio-vascular system have perished that it is difficult to command any enthusiasm for theories of pathological phenomena so based. Leaving all theories aside, thickened arteries constitute an index to a variable clinical condition. Arterio-sclerosis has a tendency to spend its worst storm upon certain of the vital organs. Brain vessels may be diseased without much determinable evidence elsewhere. Syphilitic arterio-sclerosis may produce nodular changes in the circle of Willis and sylvian arteries while sparing the rest of the arterial system within the skull, thus showing a very selective action of the syphilitic. The changes due alone to cerebral arterio-sclerosis can be classed as: (*a*) Cerebral anemia, local or general, arising from diminished vessel lumen, with or without thrombosis; (*b*) cerebral hemorrhage. The results of local anemia are variable, depending upon the situation and its completeness. Thrombosis of a terminal artery generally gives rise to an area of local softening. General brain anemia arising from arterio-sclerosis without vessel plugging is said to give rise to attacks of vertigo, fugitive motor and aphasiac symptoms. Transitory paralysis of motion and speech, while very suggestive of syphilitic arteritis is not peculiar to leucitic patients. It is the warning signal of conditions of thrombosis, whose onset may follow these warnings with all the clinical picture of an apoplectic stroke. The cere-

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bral anemia effecting the medulla is a cause of heightened tension in arterio-sclerosis. Cases of arterio-sclerosis unaccompanied with renal cirrhosis showing considerable increase in tension should be suspected as marked cerebral types of the condition. The increased blood-pressure, being called up by the cardio-vascular centres in the medullate, overcomes the diminished lumen of the cerebral arteries. I shall return again to this question of cerebral anemia and high tension under the head of cerebral hemorrhage. Arterio-sclerosis of the vessels supplying the medulla has been charged with the causation of Cheyne-Stokes respiration, Adam Stokes syndrome and a form of pseudo-bulbar paralysis.

The most common motor symptom of arterio-sclerosis is hemiplegia with or without aphasia. As pointed out before, transitory hemiplegia or aphasia is significant of impending thrombosis and its occurrence in a syphilitic subject should be met by heroic doses of iodides and free mercurial unctions. Alternating hemiplegia from arterio-sclerosis is not unknown. I saw a case under the care of Dr. Hurlbert, of Mitchell, who had had paralysis of the left arm two days previously. On the day of my visit the left arm was virtually recovered, but his right arm was completely paralyzed. There was no cardiac disease. The urine showed a trace of albumin and casts. At my visit his condition was not serious, but two days afterwards he became suddenly comatose and died in a few hours. While the case may have been uremic paralysis I am inclined to look on it as arterio-sclerosis terminating in thrombus.

As pointed out by Sir William Gower, cerebral thrombosis may give an exact clinical picture of apoplexy. In cities where syphilis is common the majority of cases of hemiplegia surviving the first week are thrombotic. This was well expressed by a well-known neurologist: "The *post-mortem* statistics of general hospitals show that the majority of cases of hemiplegia are due to cerebral hemorrhage while *post-mortem* statistics of nerve hospitals show that hemiplegia in the vast majority of cases is due to thrombosis. These apparently contradictory statistics point to the frequency of early death in cerebral hemorrhage and the chronic character of thrombotic cases. We come now to a consideration of cerebral hemorrhage. Bouchard and Charcot, in 1866, pointed out that rupture of miliary aneurisms is the cause of cerebral hemorrhage. This view of cerebral hemorrhage harmonizing with the antecedent condition of hemoptysis is being generally accepted by neurological authorities. It may not explain all the forms of hemorrhage, indeed there is evidence that in cerebral structure adjacent to new growths softening may weaken a vessel to rupture without antecedent aneurismal dilatation. I might remark while passing on the frequency of hemorrhage into and surrounding new

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growths of the brain constituting not infrequently a terminal condition. The form of apoplexy known as ingravescent is of great interest. It is onsetted with fugitive symptoms, but unlike those that precede thrombus they are neither hemiplegiac nor aphasiac, but rather the symptoms of shock, viz., the face becomes pale, the body cold and the pulse very weak; faint and exhausted, he may fall to the ground or have slight convulsion; after a little while he may walk home; he is quite sensible, but oppressed; then he becomes flushed; he answers questions slowly and gradually he sinks into coma, from which he rarely recovers." Fagge attributes this picture and its terrible fatality to abercrombie and declares that all subsequent writers have recognized the truth of it. It is the frequent picture of meningeal hemorrhage of traumatic origin and is of great medico-legal interest. English pathologists invariably refer to the frequency about with which granular contracted kidney and arterio-sclerosis are associated with cerebral hemorrhage. Continental authorities seem not to have found the kidneys cirrhotic in anything like a similar proportion of cases. The effusion blood in cerebral hemorrhage encroaches upon the blood supply of the brain through increased intracranial pressure, this necessitating increased arterial tension to force blood into the cranial cavity. The tension will mount with the increasing intracranial pressure. This mounting of arterial pressure serves to help diagnose apoplexy from other forms of coma.

Any form of acute compression threatening to produce anemia of the medulla will be attended by a rise in blood-pressure to restore the local circulation. The local anemia, however, may become so severe as to lead to a failure of the vasomotor centres and a rapid fall of blood-pressure. This respiratory centre becomes likewise embarrassed. (See Harvey Cushing's article on "The Blood-Pressure Reaction of Acute Cerebral Compression, Illustrated by Cases of Intracranial Hemorrhage," *American Journal of Medical Science*, June, 1903. See also Mutter lecture in *American Journal of Medical Science*, 1902, Vol. CXXIV, page 393.) While passing, I might mention the great value of Babinski's extensor great-toe reflex as a diagnostic sign separating apoplexy from other sudden complications. The immediate appearance of Babinski's sign after cerebral hemorrhage makes it of great value. I saw with Dr. Hadley Williams and McLaren, five hours after a runaway accident, a comatose patient with a view to operation. Babinski's sign was present in both feet accompanied with forced movements on the right side. The left side was flaccid and gave the most marked Babinski sign. The patient was trephined over the right middle neurigeal artery and a large subdural clot found was removed. The opinion held before operation from the double Babinski sign that the hemorrhage

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was bilateral and extensive was shown by the temporary character of the improvement and the death of patient the following day. Before leaving the subject of cerebral hemorrhage it has often been a subject of interest whether there are persons of peculiar build or body habit who are particularly prone to apoplexy. It would seem to amount to this, Do cases of cirrhosis of the kidney show peculiar build or body habit, for it seems that the vast majority of cases of apoplexy are cases of renal cirrhosis? Apart from this line of argument, clinical statistics will show cases of apoplexy to be very frequently of spare frame. It would far exceed my allowed time to enter into the mental and sensory side of arterio-sclerosis. The meaning of the term "brain softening" to the laity shows how frequently mental symptoms attend on arterio-sclerosis. The relation of arterio-sclerosis to testimentary capacity is of interest to the medical expert. In the treatment of the cerebral type of arterio-sclerosis, the entire body must be considered before treatment is instituted. The patient should be examined from head to feet in the naked state. The state of nutrition of the skin muscles and the amount and position of the cutaneous fat constitute inarticulate speech to the experienced eye. The normal disposition of the female and male fat is very different. The former carries her fat in the breast, buttock and upper half of her four limbs, particularly the legs. The rest of the body in most cases is avoided in this warehousing in the female.

The male warehouses his fat on the neck, between the shoulders and in the abdominal cavity. The female, after the climacteric, had a tendency to take on the male type in fat disposition; but where one sees any well-marked type of this departure it will be found to be accompanied by arterio-sclerosis. In male patients a departure toward the female form of fat disposition, viz., on the limbs and buttocks, is of similar significance. It may be said that these pathological cases of fat disposition is an attempt to revert to the type seen in the child. These cases of arterio-sclerosis require massage, baths and careful dieting and regulation of out-door exercise. They are always anemic and this feature is not unfrequently overlooked, because the skin of their faces looks rosy. In syphilitic cases of cerebro-arterio-sclerosis iodides and mercurial unctions should be given heroically.

In the nonsyphilitic hypodermic use of artifical serums have given in some hands good results in cases of vertigo of arterio-sclerosis. Trunicek's salts—soda chloride, soda phosphate and magnesium phosphate made into a solution ten times as strong as in the normal serum; dose of this 1 to 2 c.c. hypodermically—have been given and supposedly good results occasionally obtained. Trunicek's salts can be given in tablets several times a day by the stomach.

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# THE MEDICAL EXPERT AS A WITNESS.*

By W. R. RIDDELL, Esq., B.A., B.Sc., LL.B., F.B.S., Edin., K.C., Toronto.
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*Mr. Chairman and Members of the Medical Profession,*—You will allow me to say, in the first place, that I decline to look upon myself as an entire stranger in a gathering of medical men and women. True it is I do not have the honor of being a doctor of medicine, nor do I practise medicine (for which I duly offer up thanksgiving every day of my life), but I had the good fortune during my earlier years to study medicine for a short time in the same office as my friend, Dr. Powell; and that has given me an interest in medical subjects and in medical men which I have never lost, and which I trust I never shall lose.

The very interesting paper of Dr. McKenzie, and the still more interesting discussion which followed, struck me as I sat on the platform as furnishing a strong illustration of what Herbert Spencer and the evolutionists call differentiation, and the advance and evolution from the homogeneous to the heterogeneous. Now, when I studied medicine there was no such difficulty about diphtheria as there is now. The diagnosis, the treatment, the prognosis were perfectly simple. If the neighbors' children had had a sore throat and died, and my child had a sore throat, then it was diphtheria. If they had not died of sore throat, then it was not diphtheria. The treatment too, was perfectly simple. Once the case is diagnosed as diphtheria—take a stick about six inches long with a piece of cotton rag more or less clean (they had no antiseptic or aseptic methods in those days) tied around one end of the stick, and make it tight with thread, No. 30 preferred; dip that into a solution of nitrate of silver and swab out the throat. That was the treatment, and the only treatment. Prognosis, too was certain. Repeat that treatment, If the child gets better it probably will not die. If it takes a turn for the worse and dies, then the case is hopeless. There were no cultures in those days. They had beef tea, indeed, but it was used to feed the patient, not the bacteria. They had nothing in the way of incubators and the like that you put into your waistcoat pockets, or into the axilla of the patient in order to develop bacteria. There was then no difference of opinion as to diagnosis, treatment, prognosis. Now I see no two medical men seem to be able to agree except on this point: "If you get a really costly medicine, the more of it you administer the better the result."

* Read at meeting of Ontario Medical Association.



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Like my friend, Dr. McKenzie, when I was asked to read a paper before this Association I had some little difficulty in coming to a conclusion as to what kind of paper would probably answer your requirements best. As however, I had already, at the request of the Medical Faculty of the University of Toronto, prepared a series of lectures for the medical students upon the sub ect of "Medical men in Court," I thought it might not be out of place to take part of one of these lectures, change it somewhat, and adapt it to the "meaner capacity," as the Shorter Catechism has it, and give you that. That will account for the didactic tone which I propose to use. You will please consider yourselves students who are sitting at the feet of Gamaliel and learning from him.

In the English language the adjective has three degrees of comparison: The positive, the comparative, and the superlative. The noun substantive, with the exception of a very few words, has nothing of the kind. One of these exceptions is the useful and expressive word "liar." There are three kinds of liars: there is the liar, the d——d liar, and the expert witness. Now that gibe, that proverb derives most of its vogue from the medical witness. And there is a modicum of truth concealed in it although when one considers what it means, and what it implies and considers what a medical witness, as a rule is, it will be found to be grossly extravagant and grossly unjust.

There are two kinds of witnesses: the common witness, who speaks as to a matter of fact; the expert witness, who speaks as to a matter of opinion; and when we remember that an expert witness is only such when he is speaking as to a matter of opinion, and that in the case of opinions there are, and always have been and always will be, differences, it is not at all wonderful that expert witnesses do not agree in their testimony.

Concerning opinions there is constant disputing: and it is not doctors alone who are constantly disputing. Take the clergy: the *odium theologium* is worse than the *odium medicum*, and the *odium forensecum*, and both of these, God knows, are bad enough. The clergy of one church believe that the theology of another church is based upon error and they know that the opinions of the clergy of that other church are wrong. Members of my church know that they are right, and the other fellows are all wrong. Orthodoxy is my doxy; heterodoxy is your doxy. Lawyers do not agree, even when they are put on the Bench. Occasionally a lawyer is put on the Bench; it is not always the case, but still those who are lawyers are put there. I have in my mind more than one case of pure law, not matters of fact at all, but matters of opinion where one court has given a verdict for the plaintiff, this has been reversed by the next court, that again reversed, and then

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in the Supreme Court this last was again reversed. The only reason, perhaps, this was not reversed again was because there was no other court to go to. Politicians—people generally—do not agree in their opinions. Over there in the adjoining Park in the Legislative Assembly this afternoon they will be discussing a matter of opinion, and if you will give me a list of the people who are going to vote, if you tell me their names, I will tell you the majority on one side or the other. Opinions must necessarily differ, and, therefore it is that the expert witness who is called upon to swear, not to a matter of fact at all, but to a matter of opinion, almost as a matter of course differs from another expert witness.

Now, you will say that I am travelling very wide from my subject, but that is really not so, as I hope to be able to show you in a few minutes. What is the object of a court? What is the witness in the box for? What are courts of justice kept up for? They are kept up for determining facts, in the first place, and then applying the law to those facts so found; the judge applies the law, the facts are found by a jury, or by a judge sitting instead of a jury—and I shall for convenience use the word "jury" instead of judge sitting for a jury. The facts so to be found by the jury are not to be found by them from their own knowledge. In the jury box, as everywhere else, one is entitled to use common knowledge, that is, what everybody is supposed to know. Everybody is supposed to know that we have night and day, there are seven days in the week, that water is wet and fire will burn, and that when medical men get together at dinner they have a good time. I won't say anything further on the latter matter, lest it might lead to painful misapprehensions. A juryman or a judge has no right to found a verdict upon his own knowledge of facts. He determines the facts upon the evidence given in the witness box and by the witnesses; and therefore it is that the witness is probably the most important man in the court of justice after all, although you will find difficulty in convincing the unhappy litigant of that.

What is the object of cross-examination? It is to determine two things. The object ultimately is the truth, and that is determined in two ways: finding out first of all how near the witness is trying to tell the truth, and secondly, how far he is worthy of belief even if he is trying to tell the truth. Now both of these two matters must be considered. A man may be perfectly truthful, telling what he believes to be the exact truth, and by reason of his want of capacity, or by reason of some idiosyncrasy, which can only be determined by careful investigation, he is not succeeding in telling the truth.

Again, the value of the evidence of a witness depends upon

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a number of things. In the first place, it depends upon the opportunity which the witness has had to investigate the matters concerning which he is giving evidence. This is the case with the common witness as well as the expert witness. I have heard medical men swear (I have never heard medical men say it outside of the witness box) that a man who has examined a patient once will have as good an idea of the extent of his injuries, and the probabilities of making a rapid recovery, as the man who has been with him from the time the injury took place, who has waited upon him, prescribed for him over and over again, who has joyed over him when he showed signs of recovery, and whose heart has gone down as his patient's health has gone down. However that may be, the means of observation which a witness has is the first thing of importance. The second thing is his capacity to observe, his capacity to form an opinion, his capacity to understand what he sees. That is a matter largely of education and of experience. Again, the value of the testimony depends upon a man's memory—how accurate is a person? how retentive is his memory? does he remember what he thinks he remembers? Is it the fact that he is telling the truth concerning something that has taken place in the past? Another thing is his capacity to say what he means. You may think that is an extraordinary statement; it is not. No man who has been much in a court of justice but will agree with me in this. Not one man in twenty appreciates the value of an accurate use of the English language. Not one man in twenty can express exactly what he means, so that there cannot be any mistake about what he does mean. The capacity to express one's thoughts, the ability to put in words and in decent English what it is desired to convey, is another thing upon which the value of a witness's testimony depends.

Another thing is his honesty. Medical witnesses are generally honest. The medical man who will allow himself to be approached, and who will give evidence contrary to fact or contrary to his real opinion, for the purpose of enabling the plaintiff to get a larger verdict out of a railway company is as much a thief, is as much a criminal, and should be behind the bars just as truly as a man who opens a bank with dynamite.

Now, the object of cross-examination is to determine how far is the man's testimony to be relied upon, how far is what he is stating the actual fact. I remember once defending a man and woman for murder. A very graphic description was given by a young girl about thirteen or fourteen years of age of a whole series of circumstances, which she detailed so well and vividly that one could see that they led to an irresistible conclusion, that the man and woman in the dock were guilty

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of murder. I cross-examined at some length and with some care. Her story wavered. Each time we approached the story from a different point of view it changed. One little circumstance was modified, and little contradictions began to appear. By a little careful leading, or perhaps by a good deal of careful leading, she began contradicting her story in important points. Before the cross-examination was through she had contradicted her whole story, and that not by inadvertence, but of intention. She had yielded to the suggestion of the stronger mind. She had been living for three months in the home of a well-known enemy of the prisoners. The judge discharged the prisoners, and would not allow the matter to go to the jury. I was asked by a clergymen ten minutes after the acquittal, "How could you get that girl to lie the way she did; did you think it was honest or right to ask her those questions?" I answered, "Yes, eternally so." He said, "Why! you knew she was telling what was not true?" "Yes, but I wanted the jury to see that girl had a mind of such a character as to yield to the suggestion of a stronger mind. That she would allow to be instilled into her brain thoughts which had never been there, and thoughts which ought not to be there, thus showing she was easily influenced." Then, taking the fact that she had been in the house of a well-known enemy of the accused for two or three months, the danger of allowing such evidence to procure a conviction was obvious.

I say cross-examination is one of the most valuable of weapons for arriving at the truth, and I speak of it because there is, at the present time, a feeling in some quarters against cross-examination. Take some of those very papers who are now crying out against cross-examination, and let anybody charge them with libel; and let that person be put in the witness box in order to give evidence against them, and they will be the very first person to say, "It is the duty of a counsel to test in every possible way how far the witness is trying to tell the truth, and how far the witness is succeeding in telling the truth." Of course, this will lead to inquiry into matters apparently irrelevant, but all proper cross-examination is directed to the sifting of opportunity, capacity, honesty.

Now, a witness has two duties. I suppose that probably will be news to you. I do not think you will find this in any of the books of medical jurisprudence. I don't think you will find it in any book of any kind—but I am not a man of theory, I am a man of practice. My profession calls upon me, and I am employed to get verdicts, if I can; that is my life work, and I propose to get verdicts by every honorable means, and I don't care one rap for theory. Your books tell you the witness has got only one duty, that is, to stand up there and tell the truth.

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That is grossly wrong. I have heard witnesses tell the truth in the witness box and nobody believed them. A witness has more than one duty. In addition to actually telling the truth, a witness owes it to himself and to his position to tell the truth in such a way that the jury and spectators will believe him. Your text-books tell you, "Go into the witness box and answer the questions truly, and then leave the witness box secure in the approval of your own conscience." I say, however, that not only should a witness tell the truth, but he should tell the truth in such a way that people will believe him—and that, after all, is the main object of a witness—to say something which will be believed and have an effect upon the verdict.

Now, that leads me a little further. A witness box is no place for frivolity. A witness box is no place for jesting or trifling. The man who has taken an oath to tell the truth is under a serious obligation, and that obligation he ought to have in his mind before he goes into the witness box. Those are common-places, perhaps, to you, but none the less they are exceedingly important. If a man is going to be a witness, it is his duty to prepare himself by finding out all the facts concerning which he is likely to be asked. An expert witness who is going to be asked about his opinion ought to prepare himself with authorities backing up his opinion; he ought to be in a position to justify his opinion to the very utmost, because if the cross-examining lawyer is worth his salt that opinion may be severely tested. Physical preparation is not out of place. An important medical witness, being cross-examined by a lawyer who understands his business, has a physical strain put upon him which is not light. The lawyer feels it, but it is his business, he is at it every day, but the witness has an unaccustomed physical strain, and therefore one going into the witness box ought to see to it that he is as far as possible physically fit. One's personal appearance is not unimportant. The man who is decently and properly dressed will receive more consideration at the hands of the judge, and at the hands of the jury, than the fop, or the sloven. The medical profession never stood higher in the estimation of the people than when they had their distinctive garb of the furred robe, the cap, and with this the gold-headed cane. The judges are wise in their day and generation when they insist on lawyers wearing the gown and being properly clothed in court. The rule of old Polonius still stands good.

> Costly thy habit as thy purse can buy,
> But not expressed in fancy; rich not gaudy,
> For the apparel oft proclaims the man.

These are preparations, things you consider before you go

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into the witness box; matters which will, or may, bear upon the value of your testimony. They won't help you to tell the truth, but none of them will hurt you in the slightest degree. All will assist you in that important matter, *i.e.*, making the truth tell.

Then in the witness box I have been in the habit of laying down for solicitors, rules which will look almost absurd to you when I mention them, but rules which in themselves have a wide usefulness, and ought to be borne in mind by every witness. One third of the time of trial courts is taken up with perfertly useless blather—not only useless in itself, but doing harm in beclouding proper evidence, in belittling the other parts of the case which ought to receive attention. Now, while judges sometimes, and lawyers oftener, are responsible for that, to a great extent witnesses are also responsible for that in no few cases.

Rule 1.—Don't answer a question until you understand it. Now, that seems silly. Go into a court room and listen to a trial; you will find witnesses persist in answering something they are not asked, and in not answering what they are asked. If in the witness box you do not understand a question, or if the question is complicated, you have a right to have the question put in such a shape as that you do understand it, and to have it put in such a shape as that you can answer it without deviating from the strict line of truth. If the lawyer declines (and there are men who will decline) you have a right to appeal to the judge, and it is the judge's duty to see to it that the question is put in such a way as is understandable, and that it may be fairly answered.

In the second place, when you do thoroughly understand the question, answer it as briefly and concisely as you can consistently with the truth. If a question can be answered "Yes" or "No," answer it "yes" or "no." If it cannot be answered "Yes" or "No," refuse to answer it "Yes" or "No." It is a well-known trick in my profession to insist, with a great air of indignation, upon a direct answer to a direct question. Of course, that is simply "talkee-talkee" for the jury. Sometimes the witness yields to the insistence of the counsel and answers "Yes" or "No," when he feels and knows no such answer should be given. This is wrong. If a question cannot be answered "Yes" or "No," you have a right to appeal to the judge, and almost invariably the judge will put things right. Do not, however, be hypercritical. The counsel for the side upon which you have been summoned as a witness will give you ample opportunity to explain your answer, and frequently the judge will say, "Answer the question. You will have an opportunity to explain." Insist on this opportunity.

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Thirdly, and a more important rule than either of the others; when you get through answering a question, shut up. Men will talk and talk and talk, and the more they talk the better the cross-examining counsel like it, because it is absolutely certain if a man keeps his mouth wide open long enough, he is going to put his feet in it. In my experience I have seen more cases lost (I mean by incidental matters) by witnesses going on talking after they had finished their answer to the question than by anything else. If the lawyer understands his business you may be sure he will ask questions enough. If you answer all the questions he will put to you, you will be doing all the law calls upon you to do, and enough to pay for all the remuneration you get. I have been asked: What should you do supposing a question should be put in such a way as that any answer to it would be misleading? Say so. You have rights as well as the cross-examining counsel, and your rights are bound to be respected. Say, "I cannot answer that question in a way that will convey the proper impression." Have the question put in such a way that you can answer it. These three simple rules seem probably almost like baby talk, but if they were observed at least one-third of the time taken up in our courts would be saved, and at least one-half of the humiliation and mental pain which witnesses experience, both before and especially after they leave the witness box would be prevented.

Don't despise the cross-examining counsel. Poor chap! he may not know the difference between a heart and a liver if he were to see them. He may know nothing of medicine generally, but if he is worth his salt, and if he is doing honest work for the fee that is paid to him—I withdraw that—promised him—he will know as much about the subject for the time being as you do. Don't despise him; he is in a different line of business, but if he is a first-class man, he will, for the time being, know his subject; and if he is anything like a first-class man he will at least make the jury believe he knows more than you do about it.

Don't get into jangles. Don't cross swords in the way of wit with the counsel. That is our play, what we are after. Give me the witness that will jest with me, particularly an expert witness, and in nine cases out of ten he will give me what I want. If the cross-examining counsel laughs at you he has either got you on the hip, or you have hit him hard. If he laughs at you, then as a rule you have got him, but if he laughs with you, you might as well leave the witness box.

I have seen cases lost by witnesses being too smart. I have in my mind now a case (I think there is at least one gentleman in this hall who will remember it) where a medical witness,

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called for the defence, used the word "imagination" in reference to the diagnosis of one of the medical witnesses called for the other side. Plaintiff's counsel knew that was all he wanted. Of course at once he was glowingly indignant at the idea of a member of a liberal and learned profession talking about another member of that profession using his imagination. It was perfectly useless for that medical man to say that he was using the word "imagination" in Tyndall's sense, "the scientific use of the imagination." The jury did not know Tyndall, and did not want to. All they knew was that one medical man ventured to say another medical man was imagining things, and promptly gave a verdict for the plaintiff.

Another medical man of the highest standing had the effect of his evidence absolutely destroyed when he admitted to me in the witness box that he was an advocate. It was perfectly useless for the gentlemen to say that when he used the word "advocate" he meant an advocate for the truth. The jury knew well what an advocate was. That he was a lawyer employed and paid to speak upon one side.

Don't go and talk outside of the question, and "don't get gay."

Now, Mr. Chairman and gentlemen, I have talked already longer than I intended. I have been trying to say to you something practical, and these are not "Counsels of perfection." I know medical witnesses who, under cross-examination (while I daresay they never heard of any such rules as these I have been speaking of), have followed exactly the spirit of these rules, and as though they had them in mind. Any medical man who respects himself, and is willing to do what is right, need have no fear of his position in the witness box under cross-examination if, first, he understands his business; secondly he takes pains to prepare himself; and thirdly, he is willing to tell the truth.

Gentlemen, I thank you very heartily for your kindness and the honor you have conferred upon me. If anything I have said will in the slightest degree assist you in the future, I am more than repaid.

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# THE SIGNIFICANCE OF ALBUMIN IN URINE.*

By JOHN A. AMYOT M.B.

Albuminuria is a condition of the urine in which, in some form or other, one or more of the members of the proteid group is present. Those of the proteids which chiefly concern us from a clinical standpoint are serum-albumin, globulin, hemoglobin, nucleo-albumin, albumoses, peptones, egg-albumin and caseinogen.

Albuminuria, is usually taken to indicate disease of the kidneys, and its absence, on the other hand, to mean that there is no disease of them.

Proteids may enter the urine by other channels than the kidneys. Certain proteids may pass through the kidneys without there being disease of them, and again, we may have disease of the kidney without any albumin at all showing in the urine.

To the clinician, the value of the discovery of the presence of albuminuria lies in the fact that by combining symptomatology with certain simple and yet sufficiently accurate chemical and microscopical methods, it is possible to arrive at a pretty fairly accurate idea as to the source and significance of proteids in the urine of a given case.

The albumin of the urine that physiologists dispute over is that which is present in such small quantities that very special methods are required to show it. The ordinary methods used clinically do not show those physiological (?) quantities. The chief source of this so-called physiological proteid is probably the protoplasm of the shed and then disintegrated epithelial cells—nucleo-proteids.

Any proteids foreign to the blood (egg-albumin, caseinogen, peptones and albumoses) having got access to the blood-stream are immediately got rid of by the kidneys—excreted by them. The presence of these, then, do not, of course, indicate disease of the kidneys. They simply cannot be retained in the blood, in spite of the fact that they are proteids and colloids. These will all react more or less to the ordinary clinical tests for proteids. No cellular elements, such as renal-epithelium, bloods cells, tube casts, cylindroids, etc., will be found in these cases, and the history and symptoms will help out. Cancer of the alimentary tract, ulceration or even cellular alterations of the lining membrane without abrasion of the bowel may allow of the substances to pass into the blood and thence through the kidneys into the urine. It is of special importance to keep this fact in mind in those cases that show "after-meal" albuminuria.

*Read at Ontario Medical Association, June, 1903.

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Or the presence of peptones or albumoses, and generally albumoses, when disease of the alimentary tract can be excluded, may give us a clue as to the presence of a deep-seated abscess in the body, or to disintegration of tissue, as takes place in certain cases of syphilis or some mental affections.

The proteids chiefly found in "renal albuminuria" are serum-albumin, globulin, hemoglobin and nucleo-proteids; but these may arise from other sources than the kidneys, *e.g.* perirenal tissues, the pelves of the kidneys, the ureters, the bladder, the seminal vesicles, the prostate, the urethra and the genitalia of the female (in them the urine for examination for albumin should be drawn by catheter). From these sources the proteid may come from disintegrating new-growths, abscess, sinuses, ulcerations, hemorrhages, or catarrhal inflammations. The presence of local symptoms, the quantity of proteid, and the microscopic structures found (cells from various areas) will serve to clear the diagnosis.

Now we have our "true renal albuminuria." This always indicates pathological alteration of structure or function in the kidney.

The kidney is the great excretory organ of the body. It has a vascular and a tubular structural arrangement peculiarly adapted for this purpose. Under stimulated activity an immense quantity of blood will pass through the kidneys in a very short space of time. In fact 5.6 per cent. of the total blood of the body will pass through them in one minute, which is from five to fifty-five times more than will pass through any other organ in the body, weight for weight. This blood carries with it various substances derived from various sources, *e.g.*, the alimentary tract, the internal secretions of various organs, the products of tissue metabolism, and since functions are various, so are the products. Urine is not a simple substance containing a few potash, soda and calcium salts, urea, uric acid and coloring matters, but contains various ill-defined substances, such as even under absolutely normal conditions are quite toxic. In fact it has been shown by Buchard that in fifty-two hours, aside from the salts we ordinarily think of as being present in urine, enough toxic material is produced that retained would produce death in an adult man. Surgeons know how destructive to tissues even sterile urine is. But we are not always under normal conditions. When disease comes about, new products are added to those above mentioned. The products of bacteria, *e.g.*, diphtheria, and typho-toxines (excessively destructive to tissue), and substances formed from the disintegration of our own organs, the result of the action of these various bacterial toxines. Under disturbed conditions various new products of metabolism are formed. Besides these we have various

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substances formed from the foods and materials we take into our digestive tracts. An alimentary tract functionating normally will allow many substances to pass into the circulation that are harmful (unsuitable foods, *e.g.*, "gamey" meats, fish and vegetables). But when functionating abnormally, many more and more seriously poisonous products find their way into the circulation (such as products of bacterial activity, the bacteria being let loose under these conditions, now that the normal checking functions of the body are not doing their work).

All these products, simple salts (but may be in excess), ptomaines, toxins of various kinds from the alimentary canal, leucomaines, toxins, and various products of normal and abnormal tissue metabolism, all have to go through the kidneys. Besides these, particulate-matter and even pathogenic microbes in the blood, are got rid of by the kidneys.

The work of the kidneys, under normal conditions, is heavy; under abnormal conditions it becomes excessive and trying. All the reserve is called out, but a time comes when all the substances passing through this living, active, protoplasm of the kidney cells produce their effect. The cell-protoplasm is changed in composition. It degenerates; it loses its selective power. It can no longer pick out from the blood what it is there to do, nor can it hold back substances that should be left in the blood. One class of substances it should hold back is that of the proteids, the albumins. These pass out into the urine with more or less hindrance, according to the quantity of protoplasm affected, and according to the quality of the changes that the protoplasm has undergone, according to what form of degeneration has taken place. Sometimes the cells are only slightly altered, sometimes they are killed out completely or altered so that they lose practically all function except that of looking after their own existence. In a general way the more alteration the more albumin will pass through. But the loss of the albumin is not the serious condition. The comparatively small quantity lost might have some effect on nutrition, not more, at any rate, than oft-repeated small hemorrhages. At any rate, it is not what gives rise to the pronounced and alarming symptoms in albuminuria, this loss of albumin.

Generally speaking, the quantity of albumin present is in proportion to the quantity of cellular protoplasm affected, and consequently put out of commission. In the chronic interstitial form the cells are gone, and the tubules obliterated. The toxic substances mentioned above are not excreted *in toto*, and in severe cases not at all. The consequences are grave enough where everything above the kidneys is normal, but when abnormal the consequences of their retention are much more

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grave. A patient showing renal incompetency will sometimes last a long time, but all have seen how quickly they succumb to an intercurrent, especially, an infectious febrile disease.

By the examination of the urine chemically, the quantity and quality of the albumin may be made out. By the use of the microscope the structures affected may be discovered, and indications for treatment pointed out.

When albumin is present in urine, as shown by the ordinary clinical tests, and it can be narrowed down to the kidneys as to source, we have evidence of pathological alteration in their structure or their function. On this depends the reduction of excretion, and according as this is more or less complete, the consequences are more or less grave.

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# Clinical Note.

## SOME CASES OF ANTE-PARTUM HEMORRHAGE.

By K. C. McILWRAITH M.B., Tor., F.O.S. Ed.

A number of these cases were reported at a recent meeting of the Toronto Medical Society, and the discussion to which they there gave rise leads me to hope that they may be of interest to the wider circle of the PRACTITIONER'S readers.

CASE 1.—A young negro girl was admitted to the Burnside Hospital, pregnant about eight months, suffering from quite profuse hemorrhage. On examination, a collapsible tumor, with thin walls, about the size and shape of one's finger was found presenting at the vulva. Traced upwards, this was found to take origin from the side of the vagina, and to be simply a dilated and prolapsed vein, comparable to a hemorrhoid. From a small abrasion near the base of this vein the hemorrhage was coming. With some difficulty it was tied off and the patient had no further trouble from it.

CASE 2.—Was of a somewhat similar nature. The patient came to the Burnside with hemorrhage—not quite so profuse as in Case 1. Examination showed varicose veins of the vulva and vagina. The hemorrhage was coming from one of these in the cervix. She was kept in bed and given saline purgatives and the hemorrhage ceased. She then insisted on going home, and her physician tells me that the hemorrhage did not return.

CASE 3.—Was seen in consultation with Dr. C——. The patient was about five months pregnant. She had been troubled with persistent vomiting, and her physician, finding the cervix edematous had applied iodine to it. The edema and the vomiting disappeared, but were succeeded, after a time, by continuous free hemorrhage, so much so that when I saw her she was blanched and her pulse was rapid. Examination with the speculum showed a greatly swollen cervix, from almost the entire surface of which blood was oozing. It was drawn down with tenaculum forceps, and from the punctures thus made free hemorrhage took place. A provisional diagnosis of cervicitis was made, and a piece removed for examination showed the absence of malignant disease. Saline cathartics, rest in bed, and the application of astringent tampons were advised, and under this treatment the hemorrhage was checked for a time. It returned, however, the patient miscarried and then the cervical trouble subsided.

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CASE 4.—This patient was sent to St. Michael's Hospital with a diagnosis of hemorrhage from placenta previa, a diagnosis which was confirmed on examination. The placenta was lateral, to the left of the os. The history was that of hemorrhage coming on during unusual exertion. Labor pains were present and the os partially dilated. A Braxton-Hicks version was done and the delivery then left to nature.

CASE 5.—Before patient in Case 4 had left the hospital a second patient was admitted for the same cause. In this case also the placenta was to the left, but overlapped the os. The same treatment was carried out. Both mothers recovered without further incident and one child was saved.

CASE 6.—Seen at St. Michael's Hospital in consultation with Dr. M——. The patient was nearly at full term and had lifted a wash-tub. Severe hemorrhage followed and labor set in, each pain being accompanied by a flow of blood. The os was found partially dilated. Dilatation was completed under chloroform. As the head was still freely movable above the brim and the hemorrhage was continuing, version was chosen in preference to forceps as being quicker. Mother and child both did well.

CASE 7.—Seen in consultation with Dr. C——. The patient was about the eight month of pregnancy. At the fifth month she had been operated on for appendicitis with pus formation. Subsequently she had an attack of lobar pneumonia. When I saw her the fetal heart could be heard low down to the right. She suffered at time from smart hemorrhages, and in the intervals from a greenish and rather offensive discharge. Rest and antiseptic douches, very cautiously administered, were tried, but the patient miscarried. Child was born alive, but did not live long. During the puerperium the patient had a slight attack of phlebitis.

CASE 8.—This patient I have just finished attending for the third time for the same condition. On the first occasion, a little more than two years ago, she began to suffer about the second month of pregnancy from hemorrhages, alternating with a greenish and offensive discharge. On examination the uterus was found retroverted. She was sent to the pavilion at the Toronto General Hospital, the uterus replaced, and a ring pessary inserted to keep it in place. She was kept at rest until the pregnancy had advanced so far as to make retroversion impossible and then sent home. I delivered her at full term of a male child. He has not been as healthy as her other children, and is only now beginning to walk. On two subsequent occasions she had refused to go to the hospital, and I have endeavored to carry out the same treatment at home. Early abortion has resulted each time.

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CASE 9.—In this case, at the third month, slight hemorrhage came on at intervals, without any obvious cause, for two or three days. Rest in bed for two or three days, followed by gradual resumption of housework, was sufficient to avert the threatened abortion.

CASE 10.—Was similar to Case 9. The patient had, in addition, some crampy pains. She had been for some time previous to her marriage assistant in the office of a well-known gynecologist, and feared that she might be having an ectopic pregnancy. I was able, after examination, to reassure her on this point. Rest was sufficient, and I subsequently delivered her at full term of a healthy child.

CASE 11.—Sent to St. Michael's Hospital on account of hemorrhage. Placenta previa thought possible, as no other cause could be assigned. The patient was about the seventh month of pregnancy. On examination I could find no evidence of placenta previa. She was kept in bed. There was no further hemorrhage, but labor came on in a few days, and she was delivered of one child about seven months advanced, and one dead and macerated fetus about four months advanced.

Hemorrhage from varicose veins about the vagina or cervix is not a very common cause of antepartum hemorrhage. The amount of blood lost may be large or small, according to the size of the vessel opened. I have never seen a case like Case 1 reported. The vein should be dissected up and ligatured like a hemorrhoid. When this is not practicable and the hemorrhage is severe, pressure will probably control it. In slighter cases rest and saline cathartics may be sufficient.

Severe hemorrhage from an eroded and inflamed cervix is also a rare occurrence in pregnancy. It is casually referred to by some authors, who have apparently found the hemorrhage trifling, and not at all by others. Astringent tampons are recommended. In another such case I should feel inclined to try the effect of adrenalin chloride.

The Braxton-Hicks method is the one that is most generally serviceable in placenta previa. This subject is too extensive to be taken up in detail here, but I should like to emphasize one point in this treatment, which I am afraid is sometimes overlooked. After the version is done, do not proceed to immediate delivery, for fear of tearing the cervix. This may lead to serious and sometimes fatal hemorrhage. Let nature complete the case, only assisting the after-coming head.

Case 6 was an ordinary severe case of accidental hemorrhage, and Cases 9 and 10 slight ones. No cause could be found for the hemorrhage in either of these two, and I have mentioned them because I believe that such slight hemorrhages in early pregnancy are more common than one is generally led to suppose.

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Case 8 is remarkable for the vicissitudes through which the patient came. The abortion was probably due to some slight traumatism or infection of the uterine wall at the time of the appendicitis operation. Had the pneumonia been the cause the child would probably have been dead. Mal-positions of the uterus often cause trouble in pregnancy, but are usually accompanied by severer symptoms than were present in my cases. The reposition of the uterus was easily effected.

In several of these cases I have had occasion to refer to the alternation of hemorrhage with a greenish-colored and sometimes offensive discharge. It was present in Cases 7, 8 (three times), 9 and 10. The change from hemorrhage to a discharge of this nature, which gradually ceases, often means that the trouble is subsiding, but not always.



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# Selected Article.

## MODERN THERAPY OF SEPTIC PUERPERAL AND SURGICAL INFECTIONS.

Boswell Park, M.D., LL.D., Buffalo, N.Y., Professor of Surgery University of Buffalo, says (*Alpha Omega Delta Bulletin*, March, 1893), that the most efficient measures for the treatment of surgical infections are the various silver preparations, for whose introduction into surgical and obstetrical work we are indebted to Credé, of Dresden. We have been for decades looking in vain for an effective antiseptic which is devoid of marked toxic or irritating properties. Allotropic silver (collargolum) seems to offer us the nearest approach thereto. Between this silver preparation, which is so bland, and the silver salts, like nitrate of silver, there are the lactate and citrate of silver, also introduced by Credé, of which reasonably strong solutions can be used upon quite sensitive surfaces without producing much if any disturbance.

Let us first take the aqueous solution of soluble metallic silver (collargolum), which in the strength of 1 to 500 in distilled water makes a somewhat cloudy solution. In this strength it may be used by intravenous injection in cases of severe general or puerperal sepsis, rapidly spreading gangrene, acute articular rheumatism or other serious infections. In fact, solutions as strong as 1 to 100 may be employed, it being desirable to introduce 6 cg. (.9 grain) to 10 cg. (1½ grains) at least. If there be difficulty in injecting it into a vein it may even be given beneath the skin. Unpleasant effects will not be noticed, neither will any immediate relief follow, but the solution thus introduced coming into contact with the blood, which in these cases is swarming with germs, will promptly begin its bactericidal work, whose effects should be manifested after two or three hours by a fall of temperature and amelioration of septic symptoms. Silver used in this way has been of great service in cases of carbuncle and even of acute anthrax. Moreover, its administration may be repeated as often as may seem necessary.

When metallic silver is made into a suitable ointment (unguentum Credé), which, by the way, much resembles mercurial ointment, and is then applied to the skin, there is a rapid absorption of the silver itself with its dissemination into the blood stream and results like those just mentioned. It is simply a somewhat slower method of introducing it into the system. For many years I held and taught that the combination of resor-

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cin, ichthyol and mercurial ointment, which I believe I introduced into surgical practice, was the most effective remedy for the treatment of erysipelas and all similar septic infections. To-day I have found but one combination which I think superior for this purpose, and that is the silver ointment, unguentum Credé. I believe that its properties are more marked than those of the ointment which I so long used. No matter what part of the body be anointed absorption takes place readily and promptly, consequently any convenient surface may be medicated in this way. Cleanse the skin thoroughly, smear the ointment freely over the surface, cover the area with oiled silk, and put over this, if comforting to the patient, a warm application to promote absorption. If the surface be not tender, the ointment may be rubbed in. In cases of puerperal sepsis it may be applied over the abdomen or to the inside of the thighs. In erysipelas it should be applied to the affected part.

Lastly, I would speak of the use of lactate and citrate of silver, not only for such purposes as the preparation of catgut, silk, gauze, etc., but in solutions of from 1 to 300 to 1 to 500 for the irrigation of septic cavities, and for such purposes as washing out the peritoneal cavity in cases of tuberculous peritonitis, for which I have repeatedly used it and always with benefit.

In my own experience, in several instances, a flushing of that cavity with a 1 to 500 solution has been of the greatest apparent benefit and has never occasioned any regret. Infected bladders, uterine cavities and vaginas may be advantageously, freely and frequently washed out with similar solutions. When using them one may have the feeling that he is using solutions of greater efficacy and of far less toxicity than any of the mercurial preparations would afford. Therein lies the beauty of these preparations, that in anything like equal strength they are more effective and much less toxic than the mercurial salts.

I often state in my clinic that the good old-fashioned nitrate of silver is not used nearly so much as it should be and prove the strength of my conviction by its general use in 1 to 10 per cent., solutions in pus cavities. Not only is a full germicidal effect obtained but also that stimulation to healthy granulation which the nitrate is well known to afford. All in all, if I could have but one source for antiseptic solutions and applications I would rather look toward the preparations of silver than in any other direction.—*Buffalo Medical Journal.*

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# Editorials.

## THE MEDICAL FACULTY OF THE UNIVERSITY OF TORONTO.

The re-established Medical Faculty of the University of Toronto is now sixteen years old. The seventeenth session will be opened under unusually auspicious circumstances in the new building October 1st. As Professor Mackenzie tells us in the *University of Toronto Monthly*, the architect has been successful in combining utility with architectural beauty. The interior construction is based on what has been called the unit system of laboratory construction, worked out by Professor Minot and his colleagues for the new medical buildings of Harvard University. The unit adopted for the Toronto building is 30 by 23 feet, each unit having its long wall practically filled by two large windows, thus ensuring good lighting. The adoption of this system simplifies the problem of construction, as the partitions may be put in independent of the unit lines, and may be altered at any time in a few hours, at little expense. The building is situated in the space between the west wing of the Biological Department and the Library, and faces the University lawn. The western portion has two storys, and two wings, which run east into the ravine, have each four storys. The Arts Department of Physiology will occupy the southern and the Medical Faculty the northern portion of the building.

The definite arrangements as to the details of the programme of the opening exercises will not be completed until early in September, but we learn that the following gentlemen will attend: Professors Osler and Welch, of John Hopkins University; Professor Minot, of Harvard University; Professor Keen, of Philadelphia, and Professor Sherrington, of Liverpool, England. Invitations are also being issued to various universities and to the profession in Ontario. It is expected that the opening exercises will extend over two or three days and will be exceedingly interesting.

It is singularly opportune to have such a magnificent building completed just in time to receive the new amalgamated Medical Faculty. Much will be expected from this faculty in the near future. The profession of Ontario have for years

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demanded from the Provincial University more than we have had in the past so far as the science of medicine is concerned. They have asked especially for more original research work and a thoroughly good post-graduate course. Such demands are reasonable and should receive a prompt and satisfactory response. A good fifth-year post-graduate should be inaugurated without delay. The universities and the Medical Council of Ontario appreciate the situation and are now considering the matter carefully. Let us hope their deliberations will be wisely conducted, and that we will soon have a post-graduate course worthy of our big province.

TENTATIVE PROGRAMME OF INAUGURAL CEREMONIES.

October 1st.—3 p.m., Addresses by President Loudon (introductory); Professor Sherrington, of Liverpool University; Professor Minot, of Harvard; Professor Welch, of Johns Hopkins; Professor Keen, of Jefferson Medical College 8 p.m., address by Professor Osler.

October 2nd.—3 p.m., Special Convocation. 8 p.m., Faculty banquet.

## THE PHYSICIAN AS A GAMBLER.

The physician is generally considered to be rather a poor business man, and his history in Toronto compels us to assert that he is not a good gambler. The historian tells us that all peoples, of all shades and colors, gamble, but the biggest *plunger* of the lot is the Anglo-Saxon, "because of his superb vital life-force." We incline chiefly to three forms: horses, cards, and stock margins. The gambler at the Woodbine has a good time for a couple of weeks, has his ups and down, and, of course, comes out *short* at the end of the races. He doesn't mind, however, if he has had lots of fun, and he goes to work with the laudable aim of saving something for the next races. Card gambling is less healthy. The player works at night in a room which becomes close and stuffy, and generally smokes and drinks too much. Neither of these forms of gambling is considered correct; neither meets with the approval of the clergy.

Stock gambling is really the only form that is eminently respectable. Here the doctor can work shoulder to shoulder with the preacher, the elder, the church warden, the class-leader, the

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widow and orphan, or the fellow who has the widow's and orphan's money. We understand that the preacher is more scientific in his methods than the innocent doctor, and becomes therefore the shrewder speculator; he knows more about selling *short*. We learn from experts that in stock margin gambling it is more satisfactory to sell what you haven't got than to buy what you don't get.

Of course, in the long run, the large dealers capture the *pots*. They then become great philanthropists, pillars of churches, and by common consent occupy the highest seats in the synagogue. Occasionally, however, even the *top notchers* come to grief, but strong influences come to their rescue. The press loudly proclaims that they are men of undoubted integrity. The banks help them in various ways and assume an "attitude" that has a "reassuring effect." In troublous times things sometimes become unhinged, but gradually "stability" comes. This is well explained in a certain instance in one of the leading papers as follows: "The cause making for stability is the fact that many weak holders have been wiped out, and their places taken by strong interests, fully able to protect themselves." The devil may take care of the small holders, the press, the banks, and the people in high places don't bother much about them.

Stock fever has been endemic among the physicians of Toronto for the last twenty-five years. Our profession furnishes a fine share of the "small dealers" who are necessary for the *game*. Duffin's Creek, Hogs' Hollow, and Mimico stocks are put on the market at a suitable time. They may mean nothing, but for gambling purposes they answer very well for a while. The nothing is intermingled with the substantial in a very ingenious way. Whether one is buying 10 per cent. of nothing or of something he is in any case getting nothing The physician who gets his *tip*, buys and sells *shrewdly*, and increases a capital of one or two hundred to five hundred or a thousand dollars within a year is for a time the happiest man who walks our streets. There have been many of them during the last five years, but he is generally sadder and wiser to-day. After careful consideration and consultation with those who *know* we tender the following advice to the clever and ambitious young physician: Don't be a clam, start at once; play the *game* like a man; you will be more apt to be *closed out* soon.

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# THE TORONTO HOSPITALS FOR JULY.

The reports for July of the hospitals* in Toronto give interesting statistics regarding the health of the city.

## TORONTO GENERAL HOSPITAL.

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|---|---|
| Patients in Hospital, June 30 | 227 |
| Patients admitted in July | 260 |
| Births (male, 13; female, 7) in July | 20 |
| Total under treatment | 507 |
| Patients discharged in July | 250 |
| Patients died in July | 19 |
| Patients remaining, July 31 | 243 |

TABLE GIVING CAUSE OF DEATH.

| | MALE | FEMALE |
|---|---|---|
| *Accident (trolley) | .. | 1 |
| Anemia | .. | 1 |
| *Appendicitis | 1 | .. |
| Cancer | .. | 2 |
| Gangrene, senile | 1 | .. |
| Heart disease | 3 | 1 |
| Hemorrhage of brain | 1 | |
| Ovarian disease | .. | 1 |
| Pneumonia | 1 | |
| *Peritonitis | 2 | .. |
| Senile decay | 1 | 1 |
| *Septicemia | .. | 2 |
| Total deaths, | 10 | 9 |

* Moribund cases (6) when admitted. Only eight cases of typhoid are at present under treatment.

## ST. MICHAEL'S HOSPITAL

| | |
|---|---|
| Patients in hospital, June 30th | 149 |
| Patients admitted in July | 202 |
| Births in July | 10 |
| Discharged in July | 171 |
| Died in July | 13 |
| Patients in hospital, July 31st | 175 |

Cause of death: Pneumonia, meningitis, cancer of tongue, carcinoma of rectum, cardiac dilatation, hemiplegia, cystitis, peritonitis, nephritis, cerebral softening, intestinal obstruction, septicemia, extravasation of urine.

## GRACE HOSPITAL.

| | |
|---|---|
| Patients in hospital, June 30 | 62 |
| Patients admitted in July | 80 |
| Births in July | 13 |
| Patients discharged in July | 96 |
| Patients died in July | 3 |
| Patients in hospital, July 31 | 56 |

Nephritis, cerebral hemorrhage, and multiple abscess of liver, causes of death.

* No report received from Western Hospital.

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# Progress of Medical Science.

## OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

### Acute Violent Delirium After Cataract Extraction.

In the *Therapeutic Gazette*, Dr. Schweinitz gives an interesting account of this rather rare condition, occurring in a patient of his

The history is as follows: For a number of years he has had slowly growing cataracts, which began in the form of the so-called nuclear opacities. In order to facilitate the extraction of an unripe cataract, and temporarily to improve vision, more than a year ago I performed iridectomy on each eye. At the last clinic the right cataract, although it was not completely ripe, was readily extracted. No complication of any kind occurred until about thirty hours later, when the delirium begun quite suddenly, with hallucinations of persecution. Within an hour this delirium gave place to most violent manifestations simulating acute mania, the patient fighting and struggling and screaming incoherent sentences at the top of his voice. With much difficulty he was secured with suitably padded cuffs, and a sixth of a grain of morphine administered, followed about an hour and a half later, inasmuch as it produced no effect, by an eighth of a grain of the same drug. As the delirium continued in exaggerated degree, 1-100th of a grain of hyoscine was given hypodermically. Within half an hour the patient was quiet and gradually sank into a deep sleep. For some hours there was marked diminution in the number of respirations, which fell as low as eight per minute. At the expiration of about ten hours he awoke, weak and depressed, but entirely free from mental disturbance. The urine contained albumin and granular casts; indeed, this condition of the urine had been known for some time, as for the past year albumin had been present. His recovery has been complete; the operated eye has healed perfectly, and his visual acuity is excellent.

Mental disturbance after operations upon the eye, particularly after the extraction of cataract, is not very uncommon, and as in this patient, usually manifests itself during the evening of the second or third day after the operation. The degree of mental disturbance varies greatly. Sometimes it appears merely as an exceedingly temporary confusion of ideas, and sometimes as a violent delirium, associated with aggravated hallucinations.

Naturally, the etiology of this condition has attracted a great

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deal of attention, and all manner of theories have been advanced to explain it. It has been suggested that the disordered cerebration depends upon a special predisposition; or perhaps that the patient has been mentally unbalanced before the operation, and that the operation has simply been an exciting cause; or, to use Parinaud's phraseology, the condition depends upon extreme preoccupation of the patient for the days preceding the operation—that is, although apparently calm the patient really is in a state of suppressed excitement, which excitement liberates itself in this explosive manner after the operation is completed and he has been retired to a darkened room with bandaged eyes. Indeed, bandaging of the eyes itself has been supposed to cause the delirium, because it has been noted that in some instances immediate relief followed when the bandage was removed from the unoperated eye, thus permitting the patient to come in touch with his surroundings. Again, the delirium has been supposed to be due to the administration of drugs prior to the operation, and particularly to the instillation of atropine solution in the operated eye. Restriction of diet, alteration in the diet, the withdrawal of stimulants to which the patient has been accustomed, and the like, have all been brought forward as etiological factors.

### Leucoma of the Cornea.—Administration of Thiosinamin with Negative Results.

In the same journal, *Therapeutic Gazette*, Dr. Schweinitz speaks of the use of thiosinamin, remarking that this drug is obtained by mixing the oil of black mustard seed with alcohol and aqua ammonia. The drug is supposed to be an active alterative, and a pronounced lymph stimulant. Dr. Suker advises the use of it internally in cases of corneal opacities, and has reported cases of such opacity with some good results. The case of corneal opacity of which Dr. Schweinitz speaks (leucoma of the Cornea) was a good case on which to try the effects of thiosinamin, and it was accordingly given in full doses for three months but without the slightest effect. In this case and others in which he tried the remedy, Dr. Schweinitz failed to obtain the least favorable result.

### Operative Treatment of Glaucoma.

Mr. W. A. Harper (*Medical Age*, for June, 1903), gives a brief account of this subject. He holds that medical treatment is only palliative, all mydriatics having a tendency to increase the tension; but myotics, especially sulphate of eserine, lessen the tension, and is often an important adjunct in combating the disease.

The only curative means yet known is an operation, the

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principal one being iridectomy, first performed in 1857. Other operations have been tried, such as sclerotomy, cutting of the ciliary muscle, and more than a dozen other substitutes. All have either proved failures, or are accomplished with more or less objectionable features.

The latest operation put forward for this disease is excision of the superior cervical sympathetic ganglion. Harper thinks we are only justified in doing this operation for the cure of glaucoma when other operative measures have failed.

J. T. D.

## OBSTETRICS AND GYNECOLOGY.

IN CHARGE OF ADAM H. WRIGHT, JAMES W. F. ROSS, ALBERT A. MACDONALD, K. McILWRAITH, AND HELEN MACMURCHY.

### Puerperal Sepsis.

Dr. E. P. Davis, Professor of Obstetrics Jefferson Medical College, Philadelphia, in a recent article on this subject deals with (1) prophylaxis; (2) methods of treatment. The latter he subdivides into (*a*) valuable; (*b*) experimental; (*c*) injurious—these last being wholesale drugging, undue stimulation of the heart, and repeated intra-uterine manipulations.

Under prophylaxis the chief points mentioned are: Good care of the patient during pregnancy, the exercise of the utmost skill in preventing avoidable lacerations, and the prompt repair of unavoidable lacerations, and above all, rigid surgical cleanliness, asepsis and antisepsis in every step and detail of the labor as regards patient, nurse and physician, dressing, instruments, etc. Routine douching should never be practised.

Methods of treatment which have proven of value are briefly these: Upon the development of septic infection the physician should gently and thoroughly cleanse the uterus and vagina, removing all foci of infection and irrigation with a large quantity of lipsol or creolin solution (1 per cent.), or normal salt solution at a temperature of 100 degrees. The vagina should then be lightly tamponed with dry bichloride gauze, which is removed after forty-eight hours, and the uterus and vagina thoroughly irrigated again with lipol (1 per cent.) No further douching should be done. Other valuable methods of treatment are the application of an ice-bag covered with flannel to the abdomen, the prompt and thorough emptying of the intestine, the use of strychnia, ergot, alcohol, and morphine, if necessary. The patient's strength must be maintained by plenty of nourishment, chiefly beef-juice, broth, gruel, milk, fruit-juice, raw fresh eggs, and an abundance of water. The importance of good nursing, and of surgical intervention when indicated, is insisted on.

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The author considers that the following methods of treatment are still in the experimental stage: (*a*) The employment of antistreptococcus serum; (*b*) the administration of nuclein, in order to increase the leucocytosis; (*c*) inunctions with Credé's silver ointment or the intravenous injection of collargol; (*d*) intravenous injection of formalin "presents for consideration one patient who survived the injection"; (*e*) hysterectomy, either vaginal or suprapubic (the latter has enjoyed the smallest mortality); ligation and exsection of infected and thrombosed veins, principally those of the pelvic structures (a procedure which would seem especially applicable in cases of pyemia.) Hysterectomy of the gravid infected uterus (fetus dead) has in the author's hands given good results.—*The Philadelphia Medical Journal.*

. . . . . .

The same very important subject of puerperal sepsis was discussed at the twenty-eighth annual meeting of the American Gynecological Society recently held in Washington, a paper being read by Dr. Vineberg, of New York. Among those who spoke was Dr. J. Whitridge Williams, of Baltimore, who laid stress on the bacteriological examination of the lochia and the blood, and remarked that he had seen only two cases of puerperal sepsis in which an operation was distinctly indicated.

Dr. Craigin, of the Sloane Maternity Hospital, emphasized two points in treatment, namely, to make sure that the uterus is empty, and to do as little damage to the interior of the uterus as possible in making sure that that organ is empty. Some other physicians, in contributing to the discussion, questioned the practical value of bacteriological examinations so far as treatment is concerned.

. . . . . .

The New York Academy of Medicine discussed the surgical treatment of puerperal sepsis at their May meeting. Dr. H. J. Boldt strongly condemned indiscriminate curetting, and said further: In the acute forms of puerperal septicemia and pyemia in which it is probable that the general circulation has been invaded by micro-organisms, whether a bacteriological examination of the blood at the time of making the examination proves this or not, no method of surgical intervention is of benefit; on the contrary, it is likely to shorten life. In all puerperal infections the form of surgical intervention, if one is indicated, must be left to the judgment and conscientiousness of the physician, and the prognosis will vary according to the conditions to be combated. With our present knowledge no strict rule by which one should be governed can be laid down.

H. McM.

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# Personals.

Dr. C. R. Cuthbertson, of Toronto, started for California, August 1st.

Dr. Jamieson, M.P.P., Durham, visited Toronto Island early in August.

Dr. Gibb Wishart, of Toronto, spent the greater part of August at Go-Home Bay.

Dr. H. C. Burritt, of Toronto, returned to his home, August 14th, after a six weeks' holiday.

Dr. Wm. Britton, of Toronto, has returned after spending a holiday at Cleveland, Muskoka.

Dr. J. Cross, of Australia, after a ten years absence, is visiting his relations in this Province.

Dr. J. L. Davison, of Toronto, has returned from a successful fishing trip on the Labrador Coast.

Dr. J. T. Fotheringham left Toronto, August 4th, for the Saguenay and the Maritime Provinces.

Dr. E. W. Spragge returned to Toronto, August 13th, after a sojourn of three weeks in Muskoka.

Dr. Primrose, of Toronto, spent the month of August at Gordon Bay, Lake Joseph, Muskoka.

Dr. Edmund E. King, of Toronto, spent the month of August at Trent Bridge, on the River Trent.

Drs. E. M. Hooper and E. A. Clark, of Toronto, spent a part of the summer at Milford Bay, Muskoka.

Dr. J. T. Wagner, of Toronto, has returned from Sparrow Lake, where he spent part of the summer.

Dr. Jerrold Ball, of Toronto, left for Atlantic City, August 14th, and expects to be away about a month.

Dr. Andrew Gordon, of Toronto, spent a portion of the month of August at the King's Royal, Owen Sound.

Drs. Jas. H. Richardson and W. H. Ellis, of Toronto, spent their summer holiday in Huntsville, Muskoka.

Dr. Kennedy McIlwraith spent three weeks on one of the lakes near Bobcaygeon, and returned to Toronto, August 23rd.

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Dr. George Bingham, of Toronto, left August 12th for a visit to the Maritime Provinces.

Dr. W. H. Montague, of Hamilton, after spending several weeks at Murray Bay, returned to his home August 6th.

Dr. Palmer, of Toronto, has spent the greater part of the summer in Grimsby. He will resume practice early in September.

It is expected that the Hon. Dr. Sullivan, Senator, will be Dean of Kingston Medical College, in the place of Dr. Fife Fowler, deceased.

Drs. Reeve and Cameron, of Toronto, left England after the close of the meeting of the Allied Colonial Universities, and reached Toronto, August 21st.

We regret to state that Dr. H. B. Anderson had rather a serious relapse of typhoid, but his friends will be glad to know he has now practically recovered.

Dr. C. H. Vrooman, of Winnipeg, visited Toronto early in August, and after looking through the hospitals, went to Montreal, New York, and other cities of the United States.

Dr. Norman D. Buchanan, (Tor. '03.) and Dr. Frank C. Neal, (Tor. '03.) sailed from Montreal for Liverpool, August 11th. They expect to spend two years in post-graduate work in London, Berlin and Vienna.

Dr. William Bayard, the well-known and highly respected nestor of the medical profession of St. John, N.B., celebrated his 90th birthday, August 22nd. Dr. Bayard has been a physician for more than sixty years, is still in active practice, and in excellent health.

The Ontario Government appointed the following to compose the Provincial Board of Health. They will act for three years: Edward E. Kitchen, M.D., St. George, chairman; Alexander Thompson, M.D., Strathroy; R. P. Boucher, M.D., Peterborough; Wm. H. Oldright, M.D., Toronto; John Douglas, M.D., Cobourg; J. J. Cassidy, M.D., Toronto. The retiring members of the board are Dr. H. E. Vaux, Hamilton; Dr. J. H. McCullough, Owen Sound.

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# Obituary.

## J. W. McLAUGHLIN, M.D., M.R.C.S., and L.R.C.P., Edin.

Dr. McLaughlin, of Bowmanville, died at his home, August 9th, after a long and painful illness, aged 63. He was born in Tyrone, Darlington Township, and received his degree in medicine from the University of Toronto, in 1864. He was gold medallist in his graduating year, and was always recognized as one of the ablest of Toronto's graduates. After practising in Enniskillen for nearly eight years, he went to Great Britain for a post-graduate course, and passed the examinations for the double Edinburgh qualification. He removed to Bowmanville, and commenced practice there in 1875. From that year he was generally considered one of the best medical practitioners in Ontario. He represented West Durham as a Liberal in the Ontario Legislature for three Parliaments. In entering the Legislature he formed a partnership with Dr. Alex. Beith which continued up to the time of his death. On retiring from Parliament, he was appointed registrar for West Durham. He was an active member of the Ontario Medical Council for many years. He was what may be designated an aggressive reformer in all respects, almost a radical at times, but he was ever honest and true. No higher type of man ever existed in the medical profession of Canada.

## LUCIUS S. OILLE, M.A., M.D.

Dr. L. S. Oille, of St. Catharines, died Aug. 15th after an illness of a few weeks, aged 73. His career was, in many respects, a most brilliant one. He early gave evidence of his great ability in his course in Arts and Medicine in the University of Toronto, being a gold medallist in each department. After completing his course in medicine in 1858, he commenced practice in St. Catharines and remained there until the time of his death. Apart from his great ability, he was possessed of boundless energy, and soon took a very prominent part in all matters of public interest. He represented the city as a member of the Council, Deputy Reeve and Mayor. He took an active part in establishing the city water works system. He was the chief promoter of the first street railway between St. Catharines and Thorold and of the Niagara Central Railway between St. Catharines and the Niagara Falls. He was also president of the City Board of Trade and a member of the Board of Trustees of the Collegiate Institute for many years. In professional matters he was inclined to be pessimistic. He took a deep interest in Medical Council matters and in his *alma mater* the University of Toronto, being generally a *member of the opposition*. He was one of the organizers of the Defence

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Association of Ontario and a keen critic as to the methods of the authorities of the University of Toronto. His death means an irreparable loss to St. Catharines and the whole Niagara district.

## FIFE FOWLER, M.D. ABERDEEN, L.R.C.P. EDIN.

Dr. Fife Fowler, of Kingston, died August 3rd, aged 80. He was born at Elgin, Scotland, and came to Canada when he was twenty years of age. For many long years he was one of Kingston's most prominent physicians, and continued in active practice even in old age until a short time before his death. He was one of the founders of the Royal College of Surgeons of Kingston, and was one of the most active workers in its interests at all times. He and the late Principal Grant were mainly instrumental in bringing about closer relationships between the College and Queen's University, some twelve or thirteen years ago. He was for many years Dean of the Medical College and its representative in the Medical Council. He was possessed of good ability, great industry, and sterling honesty, and was highly respected by all who knew him within and without the profession.

## JAMES McGARRY, M.D. McGILL.

Dr. McGarry, of Niagara Falls, died August 13th, aged 69.

## JOHN BOSTWICK LUNDY, M.D.

Dr. J. B. Lundy, of Preston, died August 20th, of paralysis, aged 78. He was a graduate of the University of Buffalo, and also of the University of Toronto. He commenced practice in the early fifties in Sheffield, and removed to Galt in 1878. He went to Preston in 1888 and lived there in retirement until the time of his death. He took great interest in his profession at all times, even after he gave up general practice.

## LACHLAN CURRY SINCLAIR, M.B.

Dr. Lachlan Sinclair (Tor. '64), of Tillsonburg, died August 21st, at his home, aged 64. He was one of the best known and most successful physicians in Western Ontario. He took an active part in politics, being a strong Conservative. On account of his great popularity he was induced to oppose Mr. John Charlton in a constituency strongly Reform as a rule, and although defeated, polled a large vote. He was in all respects a public-spirited man and was highly respected by all classes and all creeds in and about Tillsonburg.

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# Book Reviews.

**Schmidt on Venereal Diseases. Lea's Series of Medical Epitomes.** A Manual of Genito-Urinary and Venereal Diseases for the use of Students and Practitioners. By LOUIS E. SCHMIDT, M.D., of Chicago Polyclinic. In one handy 12mo volume of 250 pages, with 21 illustrations. Cloth, $1.00, net. Lee Brothers & Co., Publishers, Philadelphia and New York, 1902.

This little volume contains much information that is required by the general practitioner and in a very clear and concise form. It is up-to-date and may be relied upon to give aid when in doubt. It keeps one abreast of the rapidly advancing technique.

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**Regional Minor Surgery.** By GEORGE GRAY VANSCHAICK, M.D., Attending Surgeon French Hospital, N.Y. etc., etc. Bound in cloth. Heavy book paper, 226 pages, profusely illustrated. Price, $1.50. International Journal of Surgery Co., New York.

In this day of elaborate treatise and verbose volumes and the theoretical handling of medical subjects, it is a pleasure to find an author who will take the time to elaborate the minor and practical affections. This is an opportune work and will be of the greatest service to all, but more especially to the young man just starting practice. He will find here what he will need in his early years and so nicely presented that it will be a most useful aid. Although devoted to minor surgical technics, the same amount of care has been bestowed upon the treatment of each individual condition that is, in the text-books, accorded only to subjects of major surgery. The aim throughout has been to provide the general practitioner with a book that will afford him such practical information as he can utilize in his routine surgical work. No space has been taken up by theoretical discussions, each subject being treated in a clear and concise manner, yet omitting no detail of the least importance. While in many surgical affections a number of methods are applicable, the writer has selected only those which, in an extensive experience of nearly twenty years in hospital and private practice, have proved most satisfactory. The book is profusely illustrated with original sketches.

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**Acute Dilatation of the Stomach.** By H. CAMPBELL THOMSON, M.D. (Lond.), M.R.C.P., Assistant Physician to the Middlesex Hospital, etc. London: Ballière, Tindall & Cox, 8 Henrietta Street, Covent Garden.

Acute dilatation of the stomach occasionally occurs as a primary condition, but more frequently as a complication of some pre-existing disease. It may follow operations upon any part of the body, and may rapidly cause a fatal termination to

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cases in which the patient appeared otherwise to be doing well. The condition has not, up to the present time, received the attention it deserves. This small book contains an admirable summary of its chief characteristics, together with a collection of recorded cases, which will be found very interesting and useful for both the physician and surgeon.

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**A Text-Book of Modern Materia Medica and Therapeutics.** By A. A. STEVENS, A.M., M.D., Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal and St. Agnes Hospitals, Philadelphia. Third edition, greatly enlarged, re-written and reset. Handsome octavo of 663 pages. W. B. Saunders & Company, 1903. Cloth, $3.50 net. Agents, J. A. Carveth & Co., Limited, 413-415 Parliament St., Toronto.

Since the appearance of the last edition of this book such rapid advances have been made in materia medica, therapeutics, and the allied sciences, that the author has wisely rewritten the entire work. He has altered the general plan of the book considerably, and instead of considering the drugs in alphabetical order, as in the previous editions, he has classified them according to their pharmacologic action. This arrangement, notwithstanding the present unsettled state of pharmacology, possesses certain advantages in that it aids the student to correlate established facts, and to apply them more readily to the treatment of disease.

The part devoted to Therapeutics has evidently undergone a thorough revision; and we note that all the newer remedies which have been shown by competent observers to possess real merit and to be worthy of a more extended trial at the hands of the profession, have been considered. Indeed, the work is in every particular thorough and accurate, and its title, "Modern Materia Medica and Therapeutics," is fully justified. We heartily commend the work to students and practitioners.



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# Selections.

## SURGICAL HINTS.

In the case of an intoxicated person who has received a severe injury, it is always best to empty the stomach at once by means of the stomach tube and funnel.

It is never wise to anesthetize a patient in the presence of many people. It renders them more agitated and nervous. It is preferable to anesthetize in an adjoining room, or to cause all but the anesthetist and one assistant to leave the room until the patient is thoroughly under the influence of the anesthetic.

For the removal of fish-bones, pins, needles, etc., from the upper part of the esophagus, if a bristle-probang is not at hand, make a little ball of absorbent cotton, lubricate it with a little butter after it has been tied to a string, and cause the patient to swallow it. By pulling it out again with the string the foreign body can often be removed.—*International Journal of Surgery.*

In giving ether it is a mistake, after anesthesia is complete' to conlinue it until it becomes very profound, and then to leave it off until the patient shows signs of returning to consciousness. Allowing the patient one breath of pure air to every four or five of ether will commonly keep him in excellent condition, while the anesthesia is effective and safe.

In every severe injury of the hand or fingers perfect rest is desirable, and it is always of advantage to place the hand on a splint so that the patient will be unable to use the fingers.

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**Agurin.**

Agurin is a double salt of soda theobromine and sodium acetate. It occurs as a white powder, is readily soluble in water, and has a distinct alkaline reaction. It is very hygroscopic, and solutions of the drug therefore readily decompose.

Agurin has, in a measure, replaced diuretin, the older salt of theobromine and salicylate of soda as a diuretic in dropsical conditions, and its action is similar to that of diuretin, in that it acts best in cardiac dropsy as a special stimulant to the kidneys in connection with the use of digitalis. It is well tolerated, and its effects may last several days. The dose is from ten to fifteen grains, given in powder form.—*The Clinical Review.*

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**Syphiloma Hypertrophicum Diffusum Faciei.** GOTTFRIED TRAUTMANN. (Arch. f. Derm. u. Syph).

The manifestations of tertiary syphilis often occur in the form of an elephantiasis. This form may be produced either by the products of syphilis, giving rise to a form clinically known as indurative œdema, or it may be the outcome of syphilis itself as a diffuse syphilitic infiltration. When the infiltration takes place in the region of the nose, the syphilis is often overlooked and rhynophyma accepted, especially when the patient denies infection and no other direct syphilitic manifestations are present. Such a case came under the observation of Trautmann. The patient, suffering from the local affection for thirteen years, has been regarded by competent physicians as a case of rhynophyma. The consistency of the affected tissues, the hard separate nodules without any particular development of blood vessels, the involvement in the process of the upper lip in form of sores and rhagades, spoke against rhynophyma and for syphilis. Iodide of potash taken internally procured a remarkable change and confirmed the diagnosis. —*Journal of Cutaneous Diseases.*

**An Epidemic of Trichophytosis of the Scalp in School Children.** By WERTHER. Monatshft. f. Prkt. Dermt.

Werther describes an epidemic of ringworm in school children, seventeen out of thirty being affected. The main points of interest being:

1. The different clinical forms in some of the cases.
2. The identity of the trichophyton as shown by cultures.
3. The botanical peculiarities as shown in cultures, especially in the method of "Plaut."
4. The successful inoculations of pure culture in animals and on man.

The source of infection could not be positively established, but the first case developed in a boy on his return from a vacation. The author mentions cattle as a possible source of infection, although near the end of his article he identifies the growth as Sabouraud's tricophyton of the cat. He recommends the ingenious method of Plaut (Münch. Med. Wochenschr., 1902, No. 5, S. 208) of placing the suspected hairs between a slide and a cover-glass, which is placed on most blotting-paper in a Petri-dish. The aerial forms of growth from the tricophytic hair give a very typical picture in from six to eight days. The endogenous spores or terminal chlamydospores render identification easy. The dry cultivation of the tricophytons frees it from contamination by bacteria and pus-cocci, and affords an admirable method in studying the trichophytons.—*Journal of Cutaneous Diseases.*

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# Miscellaneous.

### Importance of the Pulse in the Puerperium.

Aichel (*Muench. Med. Wochenschr.*) enters a plea for the importance of carefully noting the pulse during pregnancy, and especially during the after labor. The pulse should be taken some time during pregnancy, so that the standard pulse rate may be obtained for future reference. The author believes a study of the pulse far more valuable clinically than a study of the temperature curve. In a number of cases in which the temperature had returned to normal the pulse remained rapid, and this was in every case explained by a subsequent complication or exacerbation. In 5 per cent. of his cases Aichel found a pulse of 100 during the entire puerpermia, but inasmuch as the pulse during pregnancy had also been 100 he expected no complications and none followed. Such observations will frequently relieve the physician of much worry, as they are absolutely reliable and of fully as much value in obstetrics as in general surgery.—*Ex.*

### What Constitutes Total and Permanent Disability?

This interesting question is passed upon by the Supreme Court of Minnesota in Monahan *vs.* The Columbian Knights. The question at issue was the construction which was to be put upon the by-law of the order which says that a certain sum is to be paid out of the funds when a member in good standing becomes "totally and permanently disabled by reason of accident or disease from following any occupation whatever." The court says that in order to recover under this section it is not necessary that a member shall be disabled to the extent that he has not sufficient power to follow some easy occupation or to perform some slight service. The trial judge expressed the views of the court in apt language: "The words 'following any occupation' mean something more than the doing of one or more acts pertaining thereto. They involve the idea of continuity, and involve also the doing of all those things which are an essential part of the work or business in which a party is engaged." It is difficult to conceive of a case where a man could be so completely disabled as to prevent his engaging in any kind of occupation. In this case it was shown that the plaintiff was unable "to follow any occupation because he was not able to do all of the essential acts necessary to be done in the prosecution of an occupation.—*Journal of the American Medical Association.*

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**More Haste, Less Speed.**

The popular notion which still exists in the minds of the public, even among educated individuals, that a large dose of a given medicine must bring about a proportionately rapid cure, is obviously a most dangerous fallacy. This was exemplified by the recent narrow escape from fatal poisoning of a well-known French actress. This accomplished lady was anxious to fulfil a certain professional engagement, though suffering at the time from a cold; and tincture of aconite having been prescribed she proceeded to swallow a teaspoonful instead of a few drops, as ordered, hoping, no doubt, that by so doing the malady would be prevented from developing into anything more serious. The inevitable result followed, namely, acute aconite poisoning, manifested by numbness of the limbs and increasing circulatory weakness. Fortunately, under prompt medical treatment, the patient recovered, and the artiste will, in all probability, soon be restored to her numerous admirers. Many similar instances will doubtless be recalled by many practitioners, in which such unreasonable hurry and disregard of medical directions have led to serious mishaps.—*Medical Press and Circular.*

**Lay Advice to Recent Graduates in Medicine.**

In an editorial in the *Outlook* of June 27th are some timely bits of advice to recent college graduates, one of which is intended for graduates in medicine. It is well worthy of quotation, and we therefore present it in full.

After giving some sound advice to theological students, the writer goes on to say: "Or you are going to practise medicine. If your patients were all reasonable men and women, your task would be easy; but they are not. Even in their best estate they are not all reasonable men and women, and you will have to deal with them when they are not in their best estate, but are morbid. You will have to deal with patients who throw your medicine out of the window, and still expect you to cure them; in one house with a mother busy with other things and careless of the sick child; in another house with a mother whose weak and tearful sympathy does much to negative the influence of your presence and the effect of your medicines. It is not enough for you to know physiognomy and anatomy and therapeutics; not enough for you to know what your medical school has told you; you must know men and women—their physical constitutions, their mental and moral constitutions. You must understand them—their life, their narrownesses, their prejudices, their unreasonablenesses. You must see into them that you may minister to them."—*Boston Medical and Surgical Journal.*

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## POINTS ON ENDOMETRITIS.

The *Clinical Review* of May, 1903, published an interesting article by F. H. Martin, M.D., on "Endometritis."

In outlining the local treatment for uterine engorgement, endometritis and chronic treatment for uterine engorgements, endometritis and chronic urethritis, the writer believes it well-nigh impossible to state definitely where one of these conditions ends and the other begins, so closely are they associated. In discussing treatment, we must consider the condition to be met; the endometrium presenting its varied stages of congestion, inflammation, degeneration of membrane with its putrefactive concomitants, according as types change from acute to chronic. In acute form the discharge is catarrhal in character, and as the disease becomes chronic we see the discharge turn to a greenish-brown color and very offensive. In this stage, frequent hot vaginal douches of Glyco-Thymoline in twenty-five per cent. strength to encourage rapid depletion of the membrane, together with rest, will generally suffice. When the chronic stage is met, we must look more carefully into the cause; if displacement is present it must be corrected; if old lacerations are shown they must be aided in repair. Dilatation of the cervix will generally show us a turgid congested membrane, thickened from one-eighth to one-half inch by inflammatory process, in varying degree of decomposition, which demand radical treatment. There are those who hold against any local intra-uterine treatment, others disapprove the curette, but the ideal treatment now recognized generally is one which promptly rids the cavity of all agents that are producing toxins, the absorption of which might endanger sepsis. To thoroughly remove this broken-down membrane, the curette is used when irrigation will not suffice, the sharp variety is condemned as unnecessary and dangerous. An irrigating curette with a dull spoon is acknowledged to be the best. This instrument contains a small cannula which, when attached to a fountain syringe, permits the flow of an antiseptic solution such as Glyco-Thymoline, during the entire operation. The danger of the curette comes largely from the fact that unless used with precaution, it tends to destroy the lymph barrier or reaction layer which Nature has erected in her ideal method of combating this disease. Uterine phlebitis is aggravated by the rough use and at times the walls have been punctured. When sepsis is present, the curette is worse than useless. Depleting antiseptic measures are our hope. Glyco-Thymoline, used in fifty per cent. strength as an irrigation, rapidly reduces the inflammatory engorgement, checking further absorption of toxins, drawing outwardly through the capillaries the products of inflammation, and exerting a powerful influence in reducing temperature

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In the typical case of endometritis after thorough curettage, the intra-uterine cavity should be flushed with a fifty per cent. solution of Glyco-Thymoline; and the vagina tamponed with a well saturated Glyco-Thymoline gauze. This should be removed in twelve hours, and vaginal douches of twenty-five per cent. Glyco-Thymoline hot, ordered three times a day.

A recent case occurring in the practice of G. F. Meeser, M.D., of Philadelphia, Pa., Mrs. J. R. (multipara), aged 39, miserable appearance, anemic, nervous, digestion poor, constant pain in pelvic region, and unable to attend to household duties. Examination disclosed ovaries inflamed and the cervix enlarged and ulcerated—endometritis well marked—discharge, muco-purulent in character and very offensive. I curetted the uterus thoroughly, using a medium curette, washing out the cavity afterward with equal parts of Glyco-Thymoline and hot water, 110 F. Packed with iodoform gauze, which was allowed to remain for six hours, when it was replaced with sterile gauze saturated with pure Glyco-Thymoline. This was removed next morning and followed with an intra-uterine douche of Glyco-Thymoline in twenty-five per cent. strength. Vaginal tamponing was then instituted, using a gauze saturated with pure Glyco-Thymoline, this to remain twelve hours. Vaginal douching with a twenty-five per cent. solution of Glyco-Thymoline (hot) twice daily, gradually reducing the strength to a ten per cent. solution. This treatment was carried on about six weeks, at which time, the patient was discharged as cured.

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**Cataphoresis in Gout.**

Dr. Charles Begg claims to have obtained excellent results in the treatment of chronic gout and rheumatoid arthritis by this procedure. Two methods may be employed. either the joint is immersed in a solution of a drug to be employed, the positive electrode being placed in the bath and the negative on an indifferent part of the body, or the positive electrode is kept as wet as possible by frequent applications of the solution. The author employs a large negative electrode and a small button-shaped positive electrode.—*Edinburgh Medical Journal.*

**Etiology of the Tubal Pregnancy.**

Oritz (*Zeitschrift für Geb. u. Gyn.*), from a study of twenty-three specimens of tubal gestation, arrives at the conclusion that the cause of arrest of the impregnated ovum in the tube is the presence in the latter of cul-de-sac formed by the adhesion of neighboring folds of mucous membrane, the result of previous attacks of salpingitis. These false cavities were found in every specimen examined by examining numerous serial selections. This explanation has not been offered by any previous observer —*American Journal of the Medical Sciences.*

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**The Medico-Legal Aspect of Chloroform Administration.**

The employment of such a powerful, and under certain circumstances lethal, agent as chloroform places a very great responsibility upon the shoulders of the medical man who undertakes the task of inducing anesthesia. So great is this responsibility that the necessity of entrusting the induction of anesthesia to a qualified man specially delegated thereto is generally recognized, and no one will gainsay the inexpediency of cumulating the functions of chloroformist and operator in the same individual. Admitting that in country practice it is not always practicable to secure the assistance of a fellow-practitioner, the onus of establishing that point naturally rests with the operator. A mishap which occurred under these circumstances in the North recently formed the subject of an action for damages, it being alleged by the plaintiff—the widow of the unfortunate victim—that death was due to the inobservance of certain precautions by the surgeon, amounting to negligence. The alleged negligence consisted in the chloroform having been administered soon after a hearty meal, in the absence of skilled assistance, and the lack of appliances and drugs for resuscitation. The jury returned a verdict in favor of the defendant, having, no doubt, been influenced by the consideration that in the event of negligence being established, patients in districts remote from the centres of civilization would in future be deprived of relief even if they were willing to incur the extra risks. Any other decision, indeed, would have had far-reaching and very serious consequences for the public, since no practitioner would henceforth have been willing to render himself liable to an action for damages for doing his best to perform what he conceived to be his duty. Looking at the question from a broader point of view, it may be laid down that a practitioner who does not take all the usual precautions before administering an anesthetic, and who more particularly does not make use of the best available means which the ingenuity of inventors has placed at his disposal to minimize the risks of anesthetization, fails in his duty to his patient. We are impelled to this remark by the fact that practically all the deaths under chloroform occur when the drug is administered by what is commonly and erroneously described as the "open" method, that is to say, on a towel or ordinary mask. Present methods of teaching in the medical schools are largely responsible for this faulty procedure being so popular. It is quite the exception for a practitioner to have been trained to use a scientific inhaler which alone will enable him to measure the exact quantity of the drug that is being inhaled. One of these days the public will awaken to the unnecessary risk to which they are exposed by the neglect to

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employ such inhalers, against which nothing can be urged except their expense and the moderate amount of experience which their use requires. The aggregate death-rate from chloroform narcosis is still lamentably high, and it shows no signs of a tendency to diminish—rather the contrary. Circumstances may justify a relaxation of these precautions, but such relaxation should be the exception and not the rule, as we fear it is at present. The result of the action just referred to must not blind us to the fact that a great moral responsibility, which the whim of a jury may at any time convert into a legal responsibility, falls upon those who lightly manipulate an agent with such disastrous potentialities.—*Medical Press and Circular.*

**Sir Hector Macdonald's Incomprehensible Change of Character.**

One of the difficult things to average comprehension is that in incomprehensible change of character which sometimes comes over minds once strong and brave and great after the involution and premature overstrain sets in and the high inhibitions cease to restrain the suggestions and impulsions of the lower centres of strong organisms perverted by the changes of neurone disease and decadence.

An example of such a case appears in the later days of Bonaparte and Webster, and lately has been repeated in the bizarre immoral conduct of the brave thirty-year battle tried Major-General, Sir Hector MacDonald, whose pitiable suicide, under charges of gross immorality, the British press has not yet ceased to discuss.

While the world wonders how a man of the glorious deeds of fighting Mac, the invincible soldier of more than thirty years of dauntless heroism mid tropic war and fields ensanguined, could fall so low, only the psychologist and neurologist knowing the tenure of normal psychic neurones and neuroglia and how they break and act abnormally under the stress of overaction and astonish us by erratic and often erotic instability, can comprehend such minds.

MacDonald did things which were as much a surprise and chagrin to himself as to the friends and companions in arms who knew him best. This once manly hero, accustomed to face death as nonchalantly as the maudlin puppets who so lavishly censure him in his mental misfortune, face a puppet show, burst into tears at the momentary realization in more lucid intervals of the enormity of his erratic impulses. hitherto regulated and restrained by the once strong high psychic which had on many a bloody field led serried columns to victory and renown for his country.

At the British war office the theory of insanity was quite

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generally held. It is a pity it had not been officially so held and an army commission of inquiry into the possible insanity of such an irreproachably gallant officer who could, after thirty years of exceptional probity and courage, do the insanely immoral things reputed to him.

The *St. James Gazette*, among all the critics of the gallant soldier, appears the most to approach the true psychological estimate of this apparently much misjudged affair:

"Thirty years of service in the tropics is bound to wear a man's nerve. His lamentable end is quite consonant with innocence in a rough soldier of great determination but unbalanced judgment."

And the *Alienist and Neurologist* is quite inclined to agree with the view of the *Gazette*.

The brain of a British soldier in constant service in the tropics is liable to break, and when it fails in its higher psychic areas, when the normal inhibitions inside the lower centres may run riot and startled saner minds by otherwise unaccountable excesses.—*Alienist and Neurologist.*

## Tent Life for the Tuberculous Insane.

Tuberculosis has long been the bane of our asylums, though, happily, during recent years more strenuous efforts have been made to combat the disease by the introduction of the open-air method of treatment and the isolation of those suffering from chronic phthisis. The results have been most encouraging, and have, in a measure, been in accordance with the expectation of those who were responsible for these reforms. Some interesting experiments made in the same direction by Dr. C. Floyd Haviland with some of the tuberculous inmates of the Manhattan State Asylum show the great therapeutic value of an abundant supply of fresh air in the treatment of consumption. The patients were taken to live in tents duly protected from the weather and heated by stoves. Every precaution was also taken with regard to sanitation and food supply. At the end of one year the death-rate had fallen from fourteen to between eight and nine, while improvement was noticed in the condition of nearly all, fifty-one out of eighty-eight cases showing an increase in weight. The use of tents for this purpose is certainly more economical than wooden structures, while they would seem to be especially adapted for demented patients, upon whom the more elegant and esthetic châlet or pavilion would be thrown away. It is to be hoped that Dr. Haviland's example may be followed in similar institutions in this country and with like benefit to their inmates.—*The Medical Press and Circular.*

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### Fined for Renewing a Prescription.

The German courts have recently fined a druggist $50 and his assistant $14 on account of the fact that they dispensed a prescription calling for opium, and renewed it about 2,000 times for the same purchaser. The courts held that they should have consulted the with physician, the author of the prescription, before dispensing it in an unusual number of times.—*Practical Druggist.*

### The Technique of Lavage of the Stomach.

Neck (*Centralblatt für Chirurgie*) states that in washing out the stomach the question at this time is the danger attending the outflow or siphonage of the contents. The usual procedure consists in the introduction of a tube into the stomach; then the fluid is poured into the stomach through this tube, and then siphoned off again. In many cases this flowing out goes on easily, and apparently all of the fluid introduced comes away, but sometimes there are difficulties. Occasionally it is quite impossible to get all of the fluid to flow out of the stomach, even though a large amount of solution be put in. Even moving the tube about and the consequent straining on the part of the patient fail to empty the stomach. Such difficulty is often encountered in the cases where there is a motor insufficiency of the organ, especially when complicated by gastrectasis and pyloric stenosis. The question of completely emptying the stomach of its contents is an important one before operating upon that organ, as any fluid that may be present at the time the stomach is opened only tends to complicate the operation. In order to avoid this complication the author has endeavored to find a safe and easy method by which the stomach may be completely emptied of its contents. In the usual way of practising lavage the patient is placed in a horizontal position, or else remains sitting up. The author states that he believes in retaining either of these positions only as long as the siphonage goes on freely, and then the patient should be placed in the full pelvic position, and this will be followed in nearly every case by a return of the flow. The tube should then be slowly withdrawn (while the patient remains in this position), and as it comes out the last of the stomach contents will be withdrawn. In each case in which this method was practised the stomach was found to be completely empty at the time of operation. The author has also experimented extensively on the cadaver with this method, and with each instance with great success. In conclusion he states that in those cases where the stomach is filled with particles of food the lavage must be repeated several times before the organ is emptied.—*American Journal of the Medical Sciences.*

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## Germ Destroying and Nerve Soothing.

The following excerpt from an article in the *Virginia Medical Monthly*, by Stephen J. Clark, M.D., No. 66 W. 10th Street, of this city, plainly outlines the useful combination of two leading remedies in materia medica:

"Binz claims specific antiseptic powers for quinine; other writers are in accord with him on this point, and report good results from large doses in septicemia, pyemia, puerperal fever, and erysipelas. It is a germ destroyer of the bacilli of influenza (la grippe). Antikamnia and quinine tablets will promptly relieve in this disease. Quinine is a poison to the minute organism, sarcina; and antikamnia exerts a soothing, quieting effect on the nerve filaments. A full dose (two five-grain tablets) of this remedy will often arrest a commencing pneumonia or pleuritis. These tablets are also useful in the typho-malarial fever of the south—particularly for the hyperpyrexia—both quinine and antikamnia, as previously said, being decided fever reducers. They are likewise most valuable in cases of periodical attacks of headache of nondefined origin; of the so-called 'bilious attacks'; of dengue; in neuralgia of the trigemini; in that of 'ovarian catarrh'; and, in short, they are effective in every case where quinine would ordinarily be prescribed and without the 'ringing' which generally accompanies the administration of quinine alone."—*New York Medical Journal.*

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## An Old Friend's Endorsement.

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, OCTOBER, 1903. NO. 10

## Original Communications.

### THE SIZE OF THE PUPIL AS AN AID TO DIAGNOSIS.*

By J. T. DUNCAN, M.B., M.D.C.M.
Opthalmologist to the Western Hospital, etc.

The general practitioner, no less than the specialist, notices in almost every case brought before him for diagnosis, the *size*, the *shape*, and the *mobility* of the pupils.

First, in regard to the size, they may be contracted or dilated, or they may be unequal—one being larger than the other.

Then in regard to the shape, they may, instead of being circular in outline, be oval or irregular in shape.

And in regard to the mobility, instead of reacting to the light (or other stimulus) they may be immovable, or fixed.

Any of these changes suggest some abnormality, and it is the object of this paper first, to place on record the principal conditions in which these changes are seen, and second, to assist in the interpretation of these changes.

In order to understand the subject we must briefly glance at the anatomy of the iris; in so far as it has to do with the changes in the shape of the pupils. We will find that nature has provided a special means for the contraction of the pupil, and a special means for its dilatation.

In the structure of this very vascular curtain is to be found smooth muscle. The fibres of this muscular tissue are arranged in two directions.

First, we find them arranged in a circular manner around the pupillary edge, forming a sphincter of the pupil, and known by the name of the *sphincter pupillæ muscle*. The remaining

*Read at meeting of Canadian Medical Association, London, Ont., 1903.



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fibres are disposed in a radiating manner, constituting the *dilatator pupilla muscle.*

But another agency having to do with the size of the pupil is the blood supply. We know that the bulk of the iris is made of vessels, which lie like the spokes of a wheel, but close together. These vessels can be rapidly filled with blood, so rapidly that some authorities speak of the iris as belonging to the erectile tissues. The more the vessels are filled with blood, the smaller the pupil is.

Now, without going into the nerve supply of the iris, it will be sufficient to say that the sphincter muscle is supplied by the third cranial nerve, the dilator fibres by the sympathetic.

The size of the pupil, then, is affected in three ways: First, by the sphincter muscle of the iris; second, by the dilator muscular fibres; third, by the blood poured into the iris.

Anything which stimulates or irritates the third nerve will cause the sphincter to contract, thereby lessening the size of the pupil. Anything which stimulates or irritates the sympathetic nerves will cause the radiating fibres to contract, thereby dilating the pupil. If, however, we have stimulation of the third nerve, with paralysis of the sympathetic, we will have extreme contraction (*i.e.*, pin-point pupils) while, if we have stimulation of the sympathetic, with paralysis of the third, we will see extreme dilatation.

What abnormalities or diseases are indicated by these various changes of the pupils?

(*a*) The patient may have the pupils evenly contracted (myosis). This may indicate:

1. Locomotor ataxia (tabes dorsalis).
2. Meningitis and encephalitis (early stages).
3. Inflammations of the cervical cord (chronic).
4. Apoplexy of the pons.
5. Epileptic fits (early).
6. Uraemic poisoning.
7. Tobacco amblyopia.
8. Inflammation of the retina.
9. Opium poisoning.
10. The use of myotics (Eserine, etc.)
11. Long continued use of the accommodation as seen in watchmakers, etc. (occupation myosis.)

(*b*) Where we have the pupils evenly dilated (mydriasis) This condition is found in:

1. Paralysis of both third nerves (as after diphtheria).
2. Intra-cranial tumors (late stages).
3. Intra-cranial effusions (pressure signs).
4. Irritation of the cervical sympathetic.
5. Acute inflammation of the cervical cord or its covering.

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6. As a premonitory sign of tabes dorsalis.
7. Intestinal worms, or other irritant.
9. After epileptic fits.
11. Cataracts.
12. Amaurosis (blindness).
13. Acute mania or melancholia.
14. The use of mydriatics.

(*c*) But, again, we suppose a patient with unequal pupils, then we may suspect.

1. Tabes dorsalis.
2. General paralysis of the insane.
3. An unilateral lesion of the third or sympathetic nerve.
4. Diseased tooth.
5. Pain in any branch of the fifth nerve.
6. Old iritis. Inflammation of the right or left retina.
7. Aneurism of the carotid or innominati or a orta tumor of the neck of the same side (in early stages this will produce irritation mydriases, in late stages paralytic myosis).
8. Use of a myotic or mydriatic in one eye.
9. An unilateral lesion of the brain.
10. A congenital condition.
11. Acute glaucoma (unilateral).

Supposing any one of the abnormalities spoken of is observed, we at once proceed to see whether the pupils will react to the stimulus of light. This is done by facing the patient to a window (if possible), covering both eyes with the hands, then removing each hand in turn. If there is no dilatation in the shade, or contraction on exposure to light, the pupil is said to be immovable or fixed. (By darkening the room, and placing the patient with his back to a light, and reflecting the light first into, and then away from the eye, by a small mirror, we can decide doubtful cases of contraction and dilatation)

By the foregoing methods we may determine whether a pupil is fixed or movable.

I. The pupils are contracted and *fixed.* Then, taking up our list "*a*," we may exclude:

Uramic poisoning.
Meningitis and encephlatis (early stages).
Inflammation of the retina.
Tobacco emplyopia.
Occupation myosis.

For in all these conditions the pupils are not fixed. The movements, although slight, may be seen.

In list "*a*" remains

Tabes dorsalis.
The use of myotics.

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Apoplectic effusions.
Opium poisoning.
Epileptic fits.

The contracted and fixed pupil may be present in any of these.

But the apoplectic or epileptic condition, and opium poisoning, are usually easily recognized, so that we have only to differentiate between tabes dorsalis, and the use of myotics.

The history of the cases would quickly enable us to decide, but the standard methods of examination for a case of tabes (the use of the convergence test, etc.,) should be brought into use. Summing up list "*a*" it may be said that contracted and fixed pupils point, in the majority of instances, to a case of tabes dorsalis.

II. But the pupils, although contracted, are *movable*. The principal use of recognizing this condition is that it enables us to be almost sure that we have not before us a case of locomotor ataxy.

III. The pupils are evenly dilated and *fixed*.

This is a rare condition. Looking at list "*b*," it may be stated that some movement of the pupils may be elicited in all the conditions named, except in blindness (Amaurosis), the use of mydriatics, and in complete paralysis of both third nerves.

IV. The pupils are evenly dilated and *movable*.

Little need be added to what was said under the last heading. Of course it should be noted that in the last stages of intra-cranial tumors and effusions, no movement of the pupils can be elicited.

V. The pupils are uneven but *fixed*.

This condition almost surely points to one of two things—it is either Locomotor ataxia, or it is General Paralysis of the Insane. The size or shape of the pupil will not help us to differentiate between these two affections, but the history will quickly clear the matter up. Looking over the remaining portion of list "*c*," it may be stated that in unilateral lesions of the third or the sympathetic nerves, the pupil of one eye would be found to react freely, and in affections of the fifth nerve, both pupils would react, but the smaller one less freely than the larger. In old Iritis care must be taken, for sometimes, the adhesions are so extensive as almost to bind the iris to the lens, to a large extent preventing movement. In every doubtful case a drop of atropine solution should be used. This will solve the difficulty, for the pupil will dilate between the adhesions, thus giving a notched appearance to its edge. And unless we have a case of doubtful iritis, the pupil of the other eye will react to light. In all the remaining affections of list "*c*" movement would be seen in one pupil.

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VI. The pupils are unequal but *movable.*

In this condition we would probably find the cause to be a painful tooth or irritation of some branch of the fifth nerve. But the important point here is the fact that this condition of the pupils renders it unlikely that either Tabes dorsalis or General Paralysis is present.

Summing up the whole matter, it will be noticed, that in almost every section reference is made to Locomotor ataxy; one of the most important deductions, therefore, is, that in every case of abnormality of the pupils, (unless the cause is otherwise apparent) it is our duty to examine for this disease. If this rule were acted upon, many cases would be recognized or discovered in its early stages. When we recollect that much success attends early treatment of Tabes, but that little can be done, comparatively, if the case is not recognized until it has passed into the later stages. The importance of this rule becomes at once apparent.

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## THE COUNTRY DOCTOR.*

By JAMES S. SPRAGUE, M.D., Stirling, Ont.
Author of "Medical Ethics and Cognate Subjects," etc.

There is no composition in music which so pleasurably affects the soul of man as that termed a medley, provided such include selections (although not classical according to modern ideas) that we heard in earlier days; those dear old melodies, such as our mothers were accustomed to sing, and our fathers delighted to hear. The memory of the good old times is awakened thereby. The present moments freed from despondency, less dismal do they appear, the future is made fair and bright, and projects of pith and moment seem to have no barriers towards being consummated, or hopes and future achievments to lose their brilliant coloring.

Brief sketches in medical literature or other writings serve equally to give us a pleasurable and instructive hour when relaxation is sought, often demanded by us, who have bared our breasts and kissed the rod in the endeavor to show to our patients "conclusively and clearly, that Death is a stupid blunder merely, and not a necessity of our lives." (Longfellow's "Golden Legion.")

With these metaphors or similitudes as introductory, it would appear as desirable that for our title, *Medical Medley*, were

* Address at the meeting of the Canadian Medical Association, London, August 26th, 1903.

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better, for there are those who prefer that we designate or distinguish ourselves not as doctors, but physicians, clinicians, practitioners, practicians, therapeutists, and other highly elaborated names, which philologic research does not in every particular claim or clearly sanction. Therefore, "The Country Doctor" as our headlight for this paper will remain, and our authority for its adoption is, that the title of Doctor of Medicine was first given in 1324 by the University of Astio, in Italy.

It is admitted that he who selects to write these segments from the swirl of "Time and Tide," should be one of those whose aspirations, virtues and impulses he has studied many years. The same ambitions that possess the soul of the recent graduate, are such as we held in early days.

They have not, however well planned, been realized in many instances; the prizes have been few, the blanks have been too numerous, illustrating too forcibly that "our wills and fates do so contrary run, that our devices still are overthrown, our thoughts are ours, their end none of our own."

The Country Doctor is he whose early life was that of the country or village, as a rule he is the best gift of a highly honored and self-respecting family of sturdy yeomen, especially chosen to give honor to his name and family, and to be the equal in merit and nobility of the family doctor who lives in a nearby village, such are the incentives which arouse the young man. An experience of a few years as a Public School teacher enables him to be self-reliant and to develop personality, really an egotism. Such preparatory work is rivalled only by attendance during a few years, or better still, the full course of years required for the degree of Bachelor, in Arts or in Science. Self reliant, methodical, really sober in judgment, self-respectful and studious, fearless and tireless, is he; he should be set apart for medicine is the opinion of the family doctor, and the die is cast.

The "pale, sickly and pious" brother is evidently called to serve the Lord. Both bend their necks to the yokes as easily as they contracted croup in early life.

This introduction of the future spiritual adviser or "leader of faithful souls and guide of those who travel to the skies," is employed to serve as an illustration of the life work of these brothers, whose lives are directly associated with the people, whose lives in consequence of this co-mingling or association are recognized as chief factors in the advancement and maintenance of sanitation and morality. The future clerical personage has been presented as pale, sickly and pious, such an assertion is not applicable or desired, although too commonly believed as worthy of this definition. No profession calls for greater

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vigor or moral worth than he, who is to assist the Country Doctor, should possess; co-workers in many enterprises, in fact, for the wrongs that need resistance, or causes that need assistance are those of the highly educated clergy. The poorly educated among such men (and such are too numerous) are the enemies of progress, in fact, our enemies. Someone has said: "Such minds have no living message for any one, they are merely speaking tubes through which the past comes down to us. God help those who have to rely on what they have to give."

This world with its sunshine and flowers, God's Word in the stars; the progressive development of man's goodness; abundant evidences of increasing philanthrophy and practical benevolence are too seldom announced from the pulpit. Too much of his eloquence is employed to preserve moss covered creeds and dogmas, apparently too full of crudities and cruelties. Shorn of such tendencies, this *vir "pietate gravis,"* this co-worker of ours would help more noticeably in the progress of civilization, and more and more would our professions conduce to each other's interests, not only to our interests, but to those of the dear people whose servants we are.

Should not such a friendship and mutual and uplifting interest exist between us as held by Nisus and Euryalus, or Pylades and Orestes? If so, the saying where three medical men are assembled two of them are atheists would be untenable, or incapable of proof.

The preparation for the long sought for degree of doctor in medicine having been fulfilled, our young doctor, thoroughly disciplined thereby, advances to the footlights, the whole profession in some respects, and those in his field of labor, act as the audience. His destiny is to see that "Life's a varied light illusion, joy and sunshine, light and shadow," and that no illiberal thought or motive should characterize his doings; he learns and has been taught it, at least (if he has been properly taught) that Catholicity reigns supreme in medicine, that whatever is administered at best is the best, our only limitations in regard to therapeusis being the sun, the air, the earth and its fulness thereof. Such is the liberality of our profession while upholding, yes venerating the honored teachings of Hippocrates, Celsus, Galen, Eristratus, Heraphilus, Heraclides —not unmindful of the labors of Boerhaave, Cullen, and of others, not less illustrious, whose services are memorable, our young doctor, contrasted with his brother, the clergyman, is free to accept or reject such teachings and yet be termed regular in practice—he learns and is learning constantly that his mission on earth is a struggle, an unceasing progressive struggle to find truths—medical truths—and to live by them.

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It is his to have the "keen spirit which seizes the prompt occasion, makes the thought start with instant action, and at once plans and performs, resolves and executes," To him his profession is and ever will prove a philosophy, which never has rested and never can rest, as it knows no other law than that of progress. He learns too frequently, that a point which but yesterday was invisible, is its goal to-day and will be its starting point to-morrow.

History reminds us that new worlds have arisen and that we have lost old nations, equally can the same changes be adduced in respect to the numerous theories and schools of the past ages and the introduction of new ideas, but "he who beholds the bright countenance of truth in the quiet and still air of delightful studies," and finds encouragement in the thought that some loved theory may be either abandoned or be recast, or modified, can and will ever be able to keep a warm heart in and for his profession, and otherwise escape that condition which may justly be termed mental fossilization, a condition too frequently observed, and antagonistic to the spirit of the age.

I now introduce the Country Doctor who, possessed of such nobility of soul, such glowing aspirations, would be able, in other and more or less honored fields of labor, to advance himself to the highest and most useful point obtainable, but such is not his destiny, his work is and will be such as acquires much honor, and apart from professional services, no more useful citizen or benefactor or confidential adviser could be named. I speak as one who has full authority to make these statements, as one, who for more than three decades has been very closely associated with such men, not only with men in this, my native province, but in early professional life with colleagues, country doctors in a far distant state. Those days were days not only of perils but of discomforts and disadvantages, our faithful and tireless bronchos conveyed us and our saddle bags to widely scattered homes.

> "I scarce can think those days are gone,
> And yet like dreams they are no more."

Those were the times in which we respected our seniors who taught us much, not only in practice but in ethics, fraternal relationships then were stronger, and we well knew if consultations were necessary that our consultant would not try to rob us of our patients. To-day the consultant has to be carefully watched in too many instances, and the newly fledged doctor too frequently is ignorant of professional honor for his elders.

It is an admitted conviction that in our staunch adherence

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to a code of moral law, and in the general and intelligent honesty of our members, we, although subjected to every form of temptations, many; great and constant, can find few illustrations of violation of our code or principles of ethics, or of honor. No other occupation among men offers more abundant material for development of all that is best, that is useful and that is noblest. When it is considered that no teachings during collegiate life are given on the subject of medical ethics, it is evident that a high grade of morals has either been inherited or has been acquired in practice by the average doctor. Although our profession is in the keeping of able men, many dangers exist and are appearing which threaten our best interests, while the expenses of living and the demands for our offices have greatly increased, have we arranged our fee tariffs to such changes? Are we not capable of being aroused to recognize that we are becoming more and more enslaved by several widely known pharmacal companies? Are we not able to note that our medical journals—fortunately not all of them—are greater friends to such companies than they are to us? Is it not time that our Provincial or State Medical Boards name such journals whose columns and advertising pages have the almanac character. While these so-called pharmacal companies are announcing their so-called ethical goods to us? too frequently is the poor and struggling doctor called to pay out his hard-earned money for them, and learns, probably too late, that if he had studied his materia medica and other works on medicine relative to this subject in preference to the price list of such companies he would have served his patients far better.

The evidences furnished that old medicines are not totally abandoned, but becoming more studied and used, are many and encouraging. Should not we possess qualifications in materia medica equal to, if not superior, to those demanded of pharmacists? If so, is such the case? Would it not be advisable that we adhere strictly to the employment of such medicines and their compounds as are named in our standard works on medicine, and not to encourage preparations praised by the pharmacal company and a few well-paid officials connected with medical journals? We should prepare our own tablets and compounds, if not, our local druggist can do such work, and by so doing the interests of each other would be the better conserved. Opportunities for the study of qualifications of medical students in their primary work are being afforded me in the position of Examiner in Materia Medica and Pharmacology for our College of Physicians and Surgeons.

These reflections, or shall I name them suggestions, are introduced for our best consideration, heart to heart talks such

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as I so humbly present, are what we of the country and of the walled city so earnestly need. Although "each Life is an existence viewing itself too much through a single medium," it is well for us to observe that medicine is a very jealous mistress, and the most difficult of all arts to acquire. and at such annual gatherings of this association, is it not but our rights to make confession by naming our sins of omission and commission. To review the past, consider our present interests, and to make attempts to look into the glorious future, for Cicero says that questions of any importance have the past, the present, and the future to consider (*tria esse omnino genera quae in disceptationem cadera possint; quid fiat, factum, futurumve sit.*)

The average longevity of members of our profession is stated to be fifty-six years, if so, the average working period cannot much exceed thirty years, and we will assign the first ten years to that period in which a young doctor becomes established in practice, and if before the closing of this the first decade—this bread and butter period as Sir Andrew Clarke calls it—he has married brain and wealth, his future will have less clouds, for the richest doctors with whom I am acquainted are those who, like the penniless scions of nobility, believe that wealth is but a fair gift in exchange for a title in the family and act according to such beliefs.

The country doctor is of essential interest in any community —in fact, is he not a necessity and so regarded? The establishment of the town-pump is equally so regarded, which is maintained and kept in order and no one appears willing or able to bear expenses in the repairs thereof. His practice is, of course, at times for the money consideration, and his consideration is (if he considers) that if the liveryman had made equal trips to his and been paid the usual livery rates, he would have been better off than he as regards shekels of gold and of silver. He eateth side pork with those who eat side pork, and drinketh milk with those who drink milk. At times he drinketh port or sherry with those who drink some variety of chosen border blends of mountain dew, whose merits he announces with no sour disdain when away from home; his breath is that of new mown hay, or that of frankincense and myrrh. His experience during this first decade is such that he estimates it as passing the understanding of men, in payment for which he is paid principally in hay, oats and other products of the farm, apparently satisfied is he if he can meet his payments for drugs and medicines, and be recognized as popular; unfortunate, however, is he if ambition should tempt him to erect too costly a residence, such a step he, like others in many similar cases will have reason to regret.

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Perchance he hears of the success of a former fellow graduate, and his ambition, too, is exercised to adopt a specialty, such prospective work occupies much of his thoughts during idle moments and he is the best material from which the safe specialist emanates, but it is needless to state, such a hope is very seldom realized, he becomes more fixed to his locality, and becomes a specialist in more than one department; and the second decade finds him still there apparently afraid to move, yet anxiously looking for a government appointment; in fact, any appointment wherein there is a surety for a good living. Tired out is he, worn out really in too many instances, and really when he has become experienced, and thus more useful, but strange to state such is not the belief of his people, they want a change, yet he is always with the dear people, and a quarter of a century passes by, verily the thirty year limit is being rapidly reached and he is having for pastime the raising for the earliest potatoes or biggest beets and cucumbers, or perhaps, reaches the presidency of the county or district cattle show, or becomes the master of the village Masonic lodge—in quiet moments he feels inspired and is anxious to give the world—the medical world—many foolscap pages of his experience, but as those that look out of the window become darkened and desire fails, the world loses much, yet he forgets not those days of the usual "Hello, hello doctor," and was answered "All right" by him, and a few hours found him ten miles from home in the Bethel Settlement doing a successful version, and succeeding in overcoming much and protracted inertia, how pleasant was it to arrive home, wearied in body and soul, to find in reviewing his books that he succeeded so well, inwardly he feels as if he were a God among the people. The scene changes when he hurriedly opens a note from the editor of his best medical journal, which invites his best contribution on the financial aspect of medicine, and his wife requests a few shekels to pay her subscription to the Central Asia Missionary Society. The poetry of life and the romance of medicine suddenly vanish for he reflects that although the laboreris worthy of his hire, his account, in the Bethel settlement has not pay paidand that the prospects of reward are not too inviting—such thoughts do not long disturb him for he is rushed to the third concession to do some sewing on Jim Sharp "the reaper has run away," as Whitcomb Riley describes it. He fashioneth splints from the rail fence and taketh dinner with the men, he sayeth grace and pronounces the pork, potatoes, onions and gelatinous pie equal to the best. The open cylinder threshing machine, or the more modern wind stacker, relentless, ever starved and insatiable, does some work for him ere the evening shadows fall, and before he rests he

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has heard confessions that would break up whole families and neighborhoods; he recommends balsamics to the deacon, and terms his disorder nephritis, yet both know better, and probably it will never be known—"*Domine salve nos.*" These illustrations are those seen by the country doctor—the most revered, the most useful man, he who has the "heart within and the God overhead" impulses—"he has seen old views and patients disappearing one by one, and is entitled to a furlough for his brain and for his heart."

We cherish the memory of the old village doctor, the old country doctor; may he ever exist.

What greater birthright can any intelligent or ambitious man claim and cherish than that his name is in the list—the long list of the æsclepiadæ—of the healers of men. A list, says Oliver Wendall Holmes, which stretches unbroken to the days of Gods and of Demigods, until its earliest traditions blend with the story of the brightest of the ancient divinities. Can crowned heads claim a lineage more noble? Can the Church with its apostolic succession traditions, its lives of patriarchs, of apostles and martyrs claim a greater or more honored progeny. Are not such reflections, and the statements that coronets have been placed on the heads of many of our learned brethren, quite enough to fill our cup of ambition. Who then among us is not or has not been ambitious to be the least among them, the country doctor?

In the words of William Cullen Byrant:

> "We seek not the praise on the love-written record,
> The name and the date inscribed on the stone;
> The things that we do, let them be our story,
> Ourselves be remembered by what we have done."

These words are equally expressed by the immortal Hufeland, and more directly appropriate to our profession: "Thine is a high and holy office, see that thou exercise it purely, not for thine own advancement, not for thine own honor, but for the glory of God and the good of thy neighbors."

Hereafter thou wilt have to give an account of it. The country doctor having time for reflection recognizes these truths amid surrounding disadvantages and trials, lights and shadows, and like virtue, a country practice is its only reward.

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# SANATORIA FOR CONSUMPTIVES.*

By E. J. BARRICK, M.D., M.R.C.S., Eng., Toronto.

During the past few years there has been a world wide awakening in reference to Tuberculosis. Papers have been read at every large Medical Meeting, Associations have been formed, Congresses have been held in nearly every country with the object of checking the spread of this dread disease.

However, unless we have in view some practical and attainable end and concentrate our efforts upon it, much valuable time, and thought and energy will be expended, and very little, if any, permanent good will be accomplished.

Let us for a moment turn our attention to other great problems, and we may learn from their solution what we should aim at in an earnest endeavor to check the spread of this disease. We must keep prominently before us the fact that any solution that does not make adequate provisions for the poor, cannot for one moment be considered.

First then,—What was the goal aimed at in checking the growth and spread of ignorance of the fundamental elements of education? Was it a state university, or a private academy with Government aid, valuable as these no doubt are? Certainly not.

When the grand, heroic Egerton Ryerson came on the scene, his discerning eye saw in the distance the mountain of ignorance looming up. He evidently saw how foolish it would be to try to bring those who needed the rudiments of a liberal education to such central fountains of learning, and therefore set to work against great odds to bring a fountain of learning within reach of every pupil in every municipality of this Province, with a wide open door to the poorest and most ignorant in the land, and thus gave us our splendid system of public schools, which has been widely admired and copied.

*Secondly.*—Some twelve years ago it came to the knowledge of the Ontario Government that in the various jails of this province there were confined people who had no charge against them other than that of being poor. Did the Government take steps to bring these to a Provincial centre, to a House of Providence, or a House of Industry?

The folly of such a course was apparent, and legislation was enacted by which the Government co-operated with the County Municipalities for the establishment of Houses of Refuge, and it is gratifying to note that more than twenty

*Read before the Canadian Medical Association, London, Ontario, August 26th, 1903.

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County Municipalities have taken advantage of this Government co-operation, and have erected Houses of Refuge for their poor.

*Thirdly.*—It was brought to the notice of the Government some years ago that it was in the interest of public health that provision should be made for the isolation and treatment of persons suffering from Smallpox, Diphtheria and Scarlet Fever, where such isolation and treatment could not be obtained in their own homes. Here it was also seen how futile it would be to attempt to bring all these to some central place to be cared for, and again legislation was enacted empowering Boards of Health in the Municipality, and wholly at the expense of the ratepayer, to provide Municipal Hospitals for those suffering from these diseases.

*Fourthly.*—On 7th March, 1900, it was brought to the notice of the Ontario Government by a large and influential deputation that better provision should be made for the care of Consumptives, especially the poorer classes who could not care for themselves.

Here again it was evident that it would be utter folly to attempt to bring all these to some central place, and again within thirty days legislation in the form of an "Act respecting Municipal Sanatoria for Consumptives" passed its first reading without a single opposing voice in the Legislature and became law.

Time and experience have abundantly demonstrated the wisdom of establishing such schools, Houses of Refuge and Isolation Hospitals, and therefore is it not reasonable to assume that similar good results would follow the establishment of Municipal Sanatoria for Consumptives?

The second point I wish to present and discuss is: Shall this Municipal Sanatorium be erected and maintained by mandatory or permissive legislation?

Shall the taxpayers of a municipality be compelled by the Board of Health to assume the whole responsibility of erecting and maintaining a Sanatorium for Consumptives, and shall the victims of this disease he compelled to submit not only to compulsory notifications but also compulsory confinement in such Sanatorium?

To compulsory measures of this kind I feel constrained to enter a strong protest.

In the first place it would be unjust to the ratepayers to compel them to assume the whole responsibility of establishing and maintaining such Sanatoria in face of the proffered Government aid, and their opposition would have to be counted upon.

In the second place the patients and friends would object to such arbitrary measures, and the result would be that the hands on the dial of this great humanitarian movement would be

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turned back, and much of the progress that has been made would be lost.

Having thus objected to this coercive plan I am in duty bound to offer in its stead one that is more in keeping with the state of public opinion.

In discussing this matttr we must keep ever before our minds that the fight against Tuberculosis is primarily a campaign of popular education.

The foundations of the comprehensive movement in this country against this disease, headed by His Excellency Lord Minto, have been laid broad and deep, and the corner-stone thereof was duly laid by the Government and Legislature of this Province on the fifth of April, 1900, when the Act already referred to was passed.

Thus the first step in this campaign was made, and the first milestone on the road to success was passed.

The second step will have been made when a by-law has been submitted and endorsed by the ratepayers of a municipality. Now which municipality shall be first in the race? Shall it be London and the County of Middlesex, or shall it be Toronto? We have encountered terrible head winds in Toronto, so your chances are good.

In the passing of this Act, Goverment co-operation is secured to the extent of one-fifth of the cost of land and buildings, and $1.50 a week for each patient.

So elastic is this legislation that each municipality may surround the by-law and agreement by such conditions and restrictions as is deemed best so as to induce the ratepayers to take a favorable view of the same, and support it by their votes.

To illustrate this I give the question and conditions that were passed by the Toronto Council last December, upon which the vote was to have been taken, and the matter had gone so far that the ballots had been printed, when an injunction was granted by Judge Britton restraining the Council from taking the vote. It is gratifying, however, to note that the Act was amended last session making it legal to submit this and other questions at the municipal elections.

### QUESTION.

Are you in favor of the city contributing $50,000 towards the establishment of a Sanatorium for the treatment of residents of Toronto suffering from Consumption?

### CONDITIONS.

1. The city shall be at no expense in connection with the Sanatorium beyond the $50,000 to be granted by the city, and

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the payment of $2.80 per week for each patient sent thereto at the city's expense.

2. The Sanatorium shall be exclusively for residents of Toronto; it shall be within twelve miles of the city with 50 to 100 acres of suitable land; shall consist of an Administration Building, cottages and tents, to accommodate patients who have been bona fide residents of the city continuously for at least two years immediately prior to their admission, and shall have a wide open door to Consumptives in all conditions of life and in all stages of the disease.

3. It shall not be a free Sanatorium as such would encourage pauperism, but those able to pay shall pay, and the poor shall be treated free of charge.

4. The Board of Trustees shall consist of the Medical Health Officer and eight other persons appointed by the Council, four of whom shall be nominated by the voluntary contributors.

5. The money to be derived from the city to remain in the hands of the City Treasurer, and if the Sanatorium is proceeded with, one-half or more, as may be authorized by the City Council, shall be paid over to the trustees, when a like amount has been paid to the trustees from voluntary contributions, donations, bequests, legacies, etc., and the balance of the $50,000 is to be paid over in sums of $2,000 when a like amount is paid in from the sources above indicated.

### Plan

The proposed plan practically works out thus:—

### Land and Buildings.

| | |
|---|---|
| 1. Government Grant | $ 4,000.00 |
| 2. By-Law | 50,000.00 |
| 3. Contributions | 50,000.00 |

### Maintenance.

1. Government aid of weekly allowance of $1.50
2. Municipal aid of weekly allowance of $2.80
3. Contributions, donations, legacies, etc., from the public.
4. Contributions from patients.
5. Contributions from churches, lodges, benevolent organizations on behalf of their sick members who are unable to pay, or are entitled to sick dues.

There is reason to believe that if this Sanatorium relief is furnished, and the campaign of education as regards general sanitary measures is continued, that in five years the mortality from this disease may be reduced twenty per cent.

In support of this view I submit the following statistics

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which ought to help to convince us that efforts in the right direction are not unavailing. In London, England, where perhaps more has been done in this line than in any other city, we find the following decrease in the mortality in five years:

1891 death rate per 10,000.....22
1893 death rate per 10,000.....19
1894 death rate per 10,000.....17.04
1896 death rate per 10,000.....17.03

I submit, therefore, that the plan here outlined based upon permissive legislation and backed up by a campaign of education, is in the present state of public opinion preferable to compulsory legislation.

A Municipal Sanatorium in each county municipality would be an important local educator, and as the mind of the public became seized of its importance, patients would more readily be persuaded to take advantage of a local institution, where they would not necessarily have to pass out of the care of their own physician, and out of the reach of their friends, and where their chances of cure and improvement would be greatly increased, and the spread of the disease to their friends and the public generally would be materially checked, which is the main point in the resolution, which I have the honor of submitting for your consideration, and which I trust will receive your appproval.

In conclusion, may I earnestly plead for the 8,000 of our people who die of this disease each year in this Dominion, entailing annual financial loss, according to Dr. A. J. Richer, of $48,000,000; may I plead on behalf of this nation whose natural resources are to-day the talk of the world, whose cry is for people, more people, for capital, for more capital to develop these resources; and on behalf of this great humanitarian movement that has already obtained such splendid legislation in this Province, and that is now knocking at the doors of the councils of our cities, and county municipalities for the submission of by-laws.

Let the cry go up from Halifax to Victoria, Save the people, save this financial loss, and establish Municipal Sanatoria for Consumptives.

Dr. E. J. Barrick then moved, and Dr. R. W. Powell seconded, the following resolution, which was carried unanimously:

Whereas, The removal of cases of Tuberculosis, and especially those occurring among the poorer classes of the community, to conveniently located and well regulated hospitals, is in the best interest of both the sick themselves and the community generally, and no doubt goes far towards preventing the propagation of the disease; and, whereas, It is now an accepted fact that



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Municipal Sanatoria is the best, the most economical and efficient means of providing for their care, it is hereby resolved :—

That Municipal Sanatoria for Consumptives, in accordance with the Ontario Act respecting such, would be an important factor in checking the spread of this disease, and that therefore this Association desires to urge such local action by members of this Association as will tend to have by-laws submitted in their respective counties or districts, thereby rendering possible Government and Municipal co-operation in this necessary work.

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# TWO CASES OF UNUSUAL NERVOUS DISEASE.

By W. B. THISTLE, M.D.,
Associate Professor of Clinical Medicine in the University of Toronto.

The two cases I have to report are of interest, chiefly because of their rarity, and because of the diagnostic problems which they present. I have not encountered either of them in practice before. The facial diplegia as an isolated condition I had never seen.

CASE 1. *Facial diplegia.*—The patient, a little girl of ten years, came under my care January 27th, of this year. The child was not at all ill, but the mother noticed that she could not shut her eyes, and also that there was some difficulty about the mouth The present illness began about two weeks before coming to consult me. Inquiring into present history I found that with the exception of a slight attack of chorea about a year ago, she had been in good health. No history of sore throat, and no febrile attack of any kind recently.

Family history. Father was addicted to alcohol and died two years ago. Mother living and well. Sister living and well. The first sign of paralysis was noticed a few minutes after the child had returned from a sleigh drive on an exceedingly cold day. The mother then noticed that the mouth was drawn to one side. This deformity appeared in a day or two, and about the same time it was noticed that there was inability to close the eyes. On examining the patient I found that there was entire loss of motion on both sides of the face, with the single exception of slight movement in the corrugator supercellii on the left side. The upper eyelids could be elevated, but the eyes could not be closed.

The muscles of the neck, with the exception of the platysma were quite normal. The paralysis corresponded exactly to the muscular supply of the facial nerves.

Muscular power in all other parts of the body quite normal.

Sensation was normal in the face and the entire body.

Reflexes. Planter and knee jerks normal.

Nothing abnormal in gait or station.

No disturbance in the function of the bladder or bowels.

The facials were the only cranial nerves implicated. Function of smell, sight and hearing preserved. Movement of tongue and palate normal. Deglutition performed without difficulty.

Pupils reacted to light, were equal, normal in size, no squint. Patient can focus accurately and can read without difficulty.

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Muscles of mastication not affected, and sensation over face and in mouth quite good. Temperature and pulse normal.

The face is absolutely expressionless and mask-like. When the child laughs the effect is remarkable.

Clearly the disturbance is in the facial nerves, but the simultaneous invasion of both facials make one think of the possibility of a lesion in the pons accounting for it. The lesion, whatever its nature, must be in the nuclei, or in the course of the nerves, outward from their nuclei. If above the nuclei, some affection of the rest of the body would be inevitable. The electrical reaction also indicates infra-nuclear interference, inasmuch as there is complete loss of faradiac response in all parts supplied by the facial nerves. A lesion in the pons could, moreover, hardly take in both facial nuclei, and leave the adjacent nuclei, especially that of the sixth nerve, unaffected. The sudden appearance of the paralysis would, moreover, preclude the idea of tumor which might invade both nuclei. A second possible explanation is, that the child might have had diphtheria of a mild type, and subsequent paralysis affecting both facials. No such history could be obtained. The usual associated symptoms also were wanting. The knee jerks were normal, palate normal, no ciliary defect.

Poliomyelitis suggested itself, but the absence of acute illness and the complete confinement to the facials make it very improbable.

Double ear disease might cause facial diplegia, but here the ears were quite normal. Thus by a process of exclusion the diagnosis of damage to the facial nerves in their course was arrived at. The nuclei have already been excluded.

The first portion of the nerve can also be easily excluded, as there is no indication of any affection of the accompanying auditory nerve. That portion contained in the aqueductus fallopii cannot be the part affected, because there is no affection of chorda tympani or stapedius. Taste is preserved, and hearing normal. Thus the only parts left are the peripheral portions.

The history of a drive on a very cold day immediately before the onset is very suggestive of Peripheral facial neuritis or Bell's palsy.

The curious feature is the simultaneous affection of both nerves. The subsequent history is that usual in Bell's paralysis. After a few weeks power began to return, and with it return of faradiac response, until in April 5th, there was return of power in all parts of the face, but still incomplete. Return of power began about ten days after the patient came under observation, and was very gradual. First a very slight movement could be detected in the occipito frontalis of the left side. Then a slight dimpling of the chin. Return of power did not correspond on

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the two sides of the face. There was considerable movement on the left side before any recovery took place on the right. This occasioned the usual deformity, the mouth being drawn to the left.

The accompanying photograph shows (1) an attempt to close the eyes, (2) trying to whistle or blow out a light.

At the time of writing recovery is said to be complete.

CASE 2. *Crossed hemiplegia from tumor of lateral half of pons and adjacent cerebellum.*—In January of this year I was asked to see L. M., age seven, because of some difficulty in walking, pain in the head, vomiting, and other symptoms which had been coming on for several weeks.

Symptoms began to appear shortly before Christmas, when it was noticed that he dragged one leg, and that he had some

difficulty in his speech, and at the table. There had been no previous illness, and no injury. The boy was well nourished and has always been very healthy and strong. No indication of syphilitic inheritance.

Family history. Boy was adopted from one of the city homes. The father was said to be of dissolute habits. A brother died from tuberculous meningitis. Mother alive and well.

On examination I noticed that the face was drawn to one side, and that there was thickness of speech, and inability to close the eye on the right side. There was, in fact, fairly complete facial paralysis on the right side. The lesion was evidently in the lower segment of the facial path, affecting the entire half of the face. Walking was somewhat difficult owing

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to inability to maintain his equilibrium. The gait was decidedly staggering with a tendency to fall backwards or to the right. The gait was also spastic in character.

Examination of reflexes showed great exaggeration of the knee jerks and planter reflexes, especially on the left side. Ankle clonus marked on the left side. Muscular power much below normal on the left side, especially in the arm.

The boy at times would be seized with acute pain, and would cry and put his hand to the back of his head towards the right side. The face has the appearance of cerebral tumor. A strange blankness of expression, with staring and somewhat prominent eyes, and choked appearance. At times the face is flushed. At times also he shows sudden periods of abstraction and forgetfulness. Vomiting is of frequent occurrence. Appetite excessive.

Some difficulty with bowels and bladder. Urine retained for long periods voided involuntarily. Bowels were moved by enemata.

Sensation is normal in all parts of the body.

The symptoms manifested themselves gradually, and increased.

My first visit he could walk without support. A week later he required assistance, and a fortnight later walking was impossible.

Slight twitching, especially of the right face, and left arm noticed. He had had a convulsion before coming under my care, and a second fit on the occasion of my first visit. The epileptic seizures continued, and increased in frequency until the end.

Examination of eyes showed no optic nueritis. Pupils reacted to light, and were usually widely dilated.

Later symptoms of pressure became evident. The respiration became sighing and irregular. Camatose condition developed. Shortly before the end there was almost constant clonic spasm of the left arm. Death came suddenly. He had been talking an hour before the end.

Diagnosis was tumor on the right half of the pons and cerebellum.

The symptoms, pain and vomiting, were suggestive of tumor. Its location was indicated pretty clearly by the crossed hemiplegia together with the cerebellar gait.

The autopsy disclosed a tumor in the right half of the pons and adjacent cerebellum.

The tumor, as can be seen from the specimen presented, is of the infiltrating variety, probable gliomatous.

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# SOME BUSINESS ASPECTS OF MEDICAL PRACTICE.*

By DR. N. A. POWELL, Toronto.
Professor of Medical Jurisprudence, Toronto University.

In all the twenty-three years' existence of this association, the subject of the financial results of medical practice has never received formal consideration. When this fact was innocently mentioned by me a short time ago at a meeting of your committee on papers and business, that puissant body passed an order-in-council making me responsible for the presentation of this question before you. In spite of my objections and suggestion of others for the honor, the committee next found a place for my name on the preliminary programme. When it so appeared, a certain person, whose advice I often receive, and perhaps not quite so often adopt, inquired with airy sarcasm if the chances for one's being selected to read a paper before the Ontario Medical Association was in inverse proportion to one's knowledge of the subject to be taken up. I side-stepped her question then, but in the privacy of our closely tyled session I freely admit that, like certain medical examiners we have known, I may ask questions for which I have no answers ready.

For more than a quarter of a century I have been watching the course of medical men in practice, and trying to ascertain the causes of complete or partial failure in those who might reasonably have been expected to have been successful. Many die leaving no provision for those dependent upon them, others become medical derelicts, floating half-submerged, unless to themselves or to the world, and a positive danger to all who approach them unguardedly. A third, and always a larger, class have simply been disappointments to all who, in earlier years, had builded hopes of success for them. I present to you no statistical study, but give you instead certain clinical impressions, and shall ask how these accord with what has fallen under your own notice in watching the drift of medical life.

When I first entered practice I think it could be safely said that the larger proportion of those who did not succeed owed their failure to the use of alcohol. That is not so to-day; the profession to-day is moderate in the use of liquors, as a result of increasing self-respect and self-control; misuse of them is, in consequence, a factor having far less importance than it had even a few years ago. The doctor, who now drinks to excess, cannot keep the pace, and must go down and out more rapidly than of old. In this country twenty-three may be taken

* An address delivered before the Ontario Medical Association.

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as about the average age for entering practice, and fifty-three as the age of death for physicians as a class. This gives us thirty years as a period within which success is to be won or lost. The time and money expended in obtaining an education and gaining a practice will represent not less than five or six thousand dollars. Since most Canadians are comfortably poor at the start, or at least are free from the paralyzing influence of wealth, we may estimate that it will take four years in the country and eight in the city for the average graduate to have cleared off all arrears of debt and reached a self-supporting basis. The modern physician, it must also be remembered, is a highly evoluted individual, with tastes that must be satisfied, and needs that must be met, in addition to the ordinary living expenses of himself and of those dependent upon him. Such provision for age and sickness as every prudent man sets about making must also be taken into account.

It has been said by some one that for an ideal practitioner there are three requisites: First, he must be a thorough gentleman; second, he must be a thorough physician; and, third he must be a thorough business man. I believe that the third is the attribute most frequently lacking, and in this lies the cause of most failures.

Let me ask your attention to a few points which appear to suggest the cause of some failures. One difficulty our craft meets as many others are meeting it—the demand for first-class pay by those only able to do third-class work. That is the trouble in all other Unions as well as in ours; however, we have no walking delegate to come around and say, "This man who has made a botch of the case must be retained. You shall not discharge him and employ a better man in his place."

I think it is bad business for a physician in general practice, making an income of, we will say, over $3,000 in the country, or $4,000 in the city, to attempt to be his own book-keeper. His time is, or ought to be, too valuable for such work. If he tries to do so he will have to take the time either from his patients, or from his own needed rest and recreation. The best book-keeper he can possibly have is the one who has shown either that she had sufficient confidence in him or that she had sufficient confidence in her ability to manage him, to have married him.

Year by year the world's work is passing, in larger and larger proportion, into the hands of women. They have long had more than a working majority in our churches. Some one puts it this way:

> "In the world's broad field of battle,
> In the bivouac of life,
> The average Christian soldier's
> Represented by his wife."

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I do not say that this is right, but one cannot deny that it is so. Personally I am in accord with George Ade when he says, "It is a poor plan for a man to expect to slip through St. Peter's turnstile on Ma's ticket. But no one else can take the same interest in a physician's books as the right sort of a wife —if only she be trained and trusted.

Accounts more than six months old in the city are far better handled by a collector—an honest, kindly and tactful man—than by the practitioner himself. Such a one collects money which would otherwise never be obtained, and more important still he helps to weed out the people who are able to pay and won't—always the most unreasonable and exacting of patients. In the country it is a most valuable plan to try and get all accounts of a year's standing closed by notes. This will seldom be objected to if the notes are drawn, "without interest if paid when due; otherwise, with interest, until paid." The addition of interest hurries up the payment. I did some years of country practice, and without having recourse to the courts, excepting once to vindicate a principle, I was able to collect 92 per cent. of all accounts on my books—a fair and reasonable proportion. Knowing the circumstances of one's patients, the charges can be made right to start with, and discounts never given excepting on account of poverty.

Another thing, in my opinion it is bad business for a man to neglect his correspondence, or to sit up late into the sleeping hours with it and his other writing, when by the combination of a card index system of case-histories and chest charts, a vertical filing system for correspondence, and all other records, a type-writing machine, and a stenographer coming in for a few evening hours each week, he can keep his writing not simply up to date, but up to the hour. So few physicians seem to appreciate the value of such modern aids to rapid and accurate work that I have thought it worth more than a passing reference. The necessary outlay is almost trifling, and by such a combination one is aided in obtaining that *maxima par eruditionis*, which may be taken to mean the art of knowing where any desired information can be at once found. I had a compliment paid me along this line recently; two friends were in consultation. One made an observation, and the other asked, "How do you manage to carry such things in mind?" The other replied: "I do not try to do so. When I want a thing I 'phone Powell, and he looks it up while I hold the line."

When a man has within him the potentiality of success without lodge practice, I believe it is bad business to ever touch lodge practice. The late Dr. George Wright, a conscientious man in practice if ever there was one, said to me in an almost pathetic way, "If I had only left lodge practice severely alone,

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and given the time it took to study, and to cultivating the practice I wanted to keep, it would have been far better for me." As a rule we get the value we challenge for ourselves, and lodge practice tends to lessen a man's fee earning power and to handicap his future. Granting that there may be present an urgent need for keeping the pot boiling, if this is done by using lodge practice as fuel, it will, in the long run, prove even more expensive than coal did last winter.

It is bad business not to be, and to keep, good friends with our medical neighbors. Some are not easy to live with; this for the reason that lineal descendants of Ishmael, of Ananias and of Caliban, occasionally drift into the medical profession, and make trouble for us. After differences, they are ready to make up and bury the hatchet—but they take care to leave its handle sticking out. No honorable physician can fight with their weapons; he would have no better chance than a clawless cat in Hades. Perhaps the best way is to strive for that height of calm philosophy which will enable one to consider the annoyances they cause, as being purely educational.

Every medical man needs and should have one or more fads. How shall we define a fad? We must make the attempt since Plato has told us that there can be no rational discussion without a definition. Fads, according to my friend, Dr. J. L. Davison, are "mental antitoxines which overcome the poisons generated by cerebral over-activity." The best of these, in my judgment are shooting, fishing, photography and canoeing, but a score of others may be named for second choice. Even that refuge for senile decrepitude known as golf has a field of usefulness. Some of my friends, infected with the virus of this game, seem to think its field is a prairie.

It is bad business for a physician to go without a fairly long annual, and a number of week-end, or other interstitial holidays. No grass growing under his feet means only too often an early crop growing over his upturned toes. From labors so exacting and imperative as his, duty to himself, to his family, and to his patients, requires that he should take the prescription he so often gives to others, and should seek rest and change. His holidays should be arranged for, insisted on, and always taken. Our great dramatist has said that—

> "Universal plodding poisons up
> The nimble spirits in the arteries."

Happy the man who heeds the warning, and for whom, as Thoreau said, "The woods are full of solicitations."

It is bad business, it seems to me, to drop behind the procession for want of a good working library. Two or three good journals are absolutely necessary. In addition to these the

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purchase and right use of the latest and best work, first in one specialty, and then in another, will help wonderfully to keep a man out of the ruts. Now, what do we find in the office of the average physician, let us say, down in Kentucky? Things are better here, of course. If there were any Kentuckians here I would say, down in Tennessee. Out-dated text-books, journals bound up and never opened after they come back from the bindery, and subscription sets forced by glib-tongued agents upon their unfortunate purchasers. Only this and nothing more! What wonder that such a library, so-called, should become a factor in the failure of its owner rather than an aid to his success.

Trying to do modern surgery with an archaic outfit, or to do modern practice in offices unattractive, inconvenient, miserably equipped, dirty, disagreeable and depressing, are causes tending strongly towards failure.

Let me ask a plain question: Is a man honest with himself or with those who trust him, when he attempts serious surgical work with outfit and preparation inviting disaster? If stinginess, and not poverty, has limited the equipment, how grave is the responsibility. Look, if you will, into the ordinary obstetric satchel! Is it ready for the conducting of an aseptic confinement, and for meeting all emergencies of child-birth? Let each one of us, when he sits alone with his conscience, and seeks for the cause of a sepsis, answer this question.

Three or four other points occur to me as being elements in failure: want of thoroughness, want of decision, want of energy, and want of tact. The first of these runs through the work of many a man, and is a terrible handicap. Want of decision comes often from unduly considering the effect of what should be done upon one's immediate prospects in practice. It may prevent the right thing being done for a patient at the right time. Arnold said of Sophocles: "He saw life steadily, and saw it whole." I think the physician's attitude should be: determine what is right, and then go ahead regardless of immediate consequences, and looking to the whole life rather than to the present hour. The wise counsel given to the hero Sigurd in the Norse epic may be recalled: "Wilt thou do the deed and repent it? Thou hadst better never been born. Wilt thou do the deed and exalt it? Then thy fame shall be outworn. Thou shalt do the deed and abide it, and sit in thy place on high, and look on to-day and to-morrow as those that never die."

Want of energy—in other words, laziness—is often constitutional and incurable. The world, Emerson tells us, belongs to the energetic; certainly, no lasting success is to be won except by hustling hard work. But the energy—the push—must be

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rightly directed. It is the hits that count not the shots fired. When a small boy, in trying to get through a crowd, I found if I proceeded straight ahead I could make but little progress, but if I put one shoulder forward and used it as a wedge, I got to the front and saw the circus. In war and peace, in medicine and surgery, if one studies the lines of least resistance, and follows these he is most likely to succeed. Some time ago a circular was sent to the successful men in a certain large city asking, Why it is that not more of young men succeed. One answer read, "Because there are so many of them looking for white shirt jobs." There is, however, such a thing as pushing business too far. Quite recently I saw the advertisement of a photographer which read: "Babies reduced to $2 per dozen." We cannot hope to meet a cut like that!

The next feature to which I refer is want of tact; tact is not the right word, but it comes near it. I mean the discretion which can tell the best thing to say or do, and the best way to say or do it In theological circles they have a better word than that. An old darkie preacher said, "Brethren, what we want is sanctifigumption." Devotion to a patient's interests, and good judgment in advancing these interests, would mean about the same thing.

Please do not consider from what I have said that I have wished to convey the impression that success can be measured by the dollar sign. The commercial practitioner thinks of the money first. The true professional practitioner thinks first of his patient's interest, and then he thinks of his proper remuneration. He has got to be paid for his work for he has got to pay others. He has got to protect those at home that he loves, or that he ought to have at home to love. The love that does not protect its object had better be called by some other name.

I am willing to admit this, that no medical man who is a mercenary man, whose governing principle is mercenary, ever reaches the highest success in medicine, but a man who does not respect himself and make proper collections for the work he is doing, is not doing his duty. A wise man that I knew once used to say, "The quacks get rich, but they go to hell." My own investigations have not been carried as far as that!

Character—that all-important thing for every one—consists in a man's steadily pursuing the things for which he feels himself capable. What he loves to do he is likely to do well and successfully. Supporting this view, let me conclude this rambling talk by quoting from Arnold's recently published notebooks: "Arise, be going, count your resources, learn what you are not fit for, and give up wishing for it, learn what you can do, and do it with the energy of a man."

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# Society Reports.

## CANADIAN MEDICAL ASSOCIATION.

**The Th rty-sixth Annual Meeting He'd at London, Ontario, August 25, 26, 27, and 28, 1903.**

### Surgical Treatment.of Hallux Valvus and Bunion.

Dr. James Newell said, in this paper, that in hallux valgus the great toe is outwardly deflected, uncovering head of first metatarsal bone, and base of phalanx is dislocated outward, resulting in tissue hypertrophy and often false bursa. Palliative treatment is of little use; it consists in the wearing of a proper fitting shoe and keeping the great toe in position by some mechanical means.

Cases with well-marked deformity and pain require an operation. The technic must be thoroughly aseptic, not forgetting the cleansing of the skin between the toes of the patient. Incision should be made along inner side of great toe with its center over the bunion, excise the false bursa if present, deepen incision and retract the tissues, open joint and devide the ligaments. Insert a small metacarpal saw, dividing the head of the metatarsal bone just behind articular cartilage, sawing through from above, downward and backward. With bone forceps trim off sharp edges and remove exostoses. Wound is stitched with silkworm gut sutures, a pad of cotton is placed between great and second toes, a sheet-iron splint with an upturned piece to separate great and second toes and foot and leg bandaged. Passive motion is began in third week and splint removed in four weeks. The results of the operation are ideal.

### Uterus and Adnexa in a Hernial Sac.

Dr. Ferguson of London presented a specimen of an incompletely developed uterus and appendages removed from the sac of an inguinal hernia. The external genitals and mammary glands were normally developed, but the vagina was a cul-de-sac without trace of cervix uteri or os. The patient was thirty-two years of age, married, had never menstruated, but at recurring periods of from four to six weeks was attacked with violent headaches to the point of distraction. She left the hospital twenty-three days after the operation, perfectly well, and during the four and a half months which had lapsed since

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her operation she had been absolutely free from the attacks of headache. The speaker considered that these attacks were due to ovulation taking place or being attempted under abnormal conditions. The frequency of congenital ovarian hernia he attributed to sexual confusion during fetal development, being analogous to undescended testicle in the male. He had been unable to find the special congenital defects present in this case reported elsewhere.

### Typhoid Fever.

Dr. W. P. Caven of Toronto opened the discussion on this subject. The conditions calling for active treatment, he said, were tympanites and hemorrhage. In the former he recommended turpentine and asafœtida, in hemorrhage, morphine. Sponging should be a routine in every case, with tepid water when the temperature was below 102°, with cold water when it was above that degree.

### The Toxic Element in Appendicitis.

The toxic element in appendicitis was dealt with by Dr. E. Hornibrook of Cherokee, Iowa. He gave the most advanced views on this important subject.

### The Size of the Pupils as an Aid to Diagnosis.

J. T. Duncan of Toronto (see page 523.)

### The Physiologic Generation Cycle of Woman.

Dr. Jennie G. Drennan, St. Thomas, Ont., said that we can see in the process of evolution that structure is determined and preceded by function and function by environment. Thus in the generative system changes due to changes in enviroment occur. Adaptation and heredity are the two factors which cause the changes wrought by evolution. Thus evolution works both backward and forward. The physiologic generative cycle is comprised of three factors, ovulation, pregnancy and lactation. These follow each other in physiologic sequence, one being completed before another begins. Every physiologic process is accompanied by a physiologic hyperemia, and so during the different periods the circulation is increased in that organ, which is functionally active. If from any cause a larger amount of blood is directed to a non-active organ the active organ is deprived of some of its normal blood supply and its function is lessened.

Ovulation, with its tending sexual excitement, is to the mammal what blossoming is to the plant, an evidence on the part of each that a seed is ready for impregnation. Fecunda-

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tion normally should follow ovulation, then pregnancy and lactation. This is the physiologic cycle in mammals, and the primitive human female. But in the woman of civilization this cycle is interrupted by a lesser, a monthly, one, consisting of ovulation and menstruation. This is a pathologic condition arising from non-adherence to natural law. In primitive woman this lesser cycle occurs only occasionally and does not interfere with the larger cycle, but as the scale of civilization is ascended the reverse is the case. Civilization precedes menstruation. Every menstruation is the sign of a disappointed pregnancy. The human female has thirteen of the periods in a year; why this frequency in an animal whose offspring requires longer time for development *in utero* and for sustenance after birth? Should one not naturally expect ovulation to occur at much longer intervals? Such would be the case if natural law had been and were now obeyed; if an adaptation to a pernicious environment had not occurred.

In mammals and primitive woman ovulation occurs at distinct periods of the year and at no other time. Mating with the primitive woman was much like that of the brute creation now; as soon as she was sexually mature she married and entered on the physiologic cycle of a mammal, one factor of this cycle following another as night follows day and day night. As she nourished her child about two years, the length of the cycle would be about three years. Primitive peoples do not produce large families.

In the married aspirant to civilization a disrespect to natural law has arisen, and error has been handed down. As a race becomes more artificial in its mode of life it becomes a more sexually-inclined race; every factor in life is then sought as a source of pleasure. The sexual element becomes adapted to the new state of life; the function of the ovary is increased and ovulation becomes a monthly phenomenon and the lesser cycle predominates.

### The Medical Treatment of Diseases of the Nose and Throat.

Dr. John Hunter of Toronto, read a paper on the above subject. The functions of that portion of the respiratory tract were referred to, including the respiratory and vocal functions. A general statement was made, referring to the condition of the body, and maintenance of good health, the influence that any other disease of the body would have upon any disease of the nose and throat, and the local treatment consisting of thorough cleansing of the secretions. Several methods were mentioned; amongst others the nasal douche in which great care must be exercised, that the return current be not obstructed lest infectious material be carried into the middle ear, and violent ear

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trouble set up. Special reference was made to the irrigation tube which consisted of a hard rubber catheter closed at the end with numerous perforations in the circumference. The tube was introduced into the nostril and attached to a syringe. Reference was made to the spray and the medicated vapor and special reference was made to the patient's returning regularly to the physician's office, that after the cleansing process the vestibule should be dilated with a nasal speculum, and by means of a hand mirror the nasal chambers illuminated, and with a probe the tissues might be examined, and a stronger application applied to the diseased portions.

The mucous membrane must be cleansed from crust, and stimulating applications applied. In syphilitic lesions the surfaces were cleansed and brushed with a strong solution of iodine. In tertiary syphilis strict attention must be paid to constitutional treatment, iodine of potassium in doses of twenty to a hundred and twenty grains in a tumbler of water, one hour after each meal until physiological tolerance was reached

## Gunshot Wound of the Upper Arm with Nonunion of Humerus and Destruction of the Musculospinal Nerve.

Dr. Hadley Williams, London, reported a case with operation six months later terminating in recovery. The patient was a male, aged twenty-two, who was shot through the arm, totally destroying the center of the humerus and tearing away two and a half inches of the musculospinal nerve. He came under Dr. Williams' care four months after the accident. He found the bone ununited, a discharging sinus present, and complete paralysis of the musculospinal nerve. He operated by dissecting out the nerve and resecting two inches of bone to bring the nerve-ends together, and uniting the nerve-ends by through-and-through silk sutures. Four months later the bone was still ununited, and there was no relief of the paralysis, although the nerve-ends had united. A second operation was now performed. A special silver plate was made, two inches long and one inch wide, with a screw-hole at each corner. The ends of the bone were freshened, the silver plate laid in position over the line of separation secured by four silver screws screwed into the bones. A cushion of muscular tissue protected the nerve from possible involvement in callus. In six weeks bony union was complete, in six months and four days after the nerve was sutured (first operation) movement began in fingers and wrist, twelve weeks later in the thumb, and three weeks later paralysis entirely disappeared. The patient was exhibited for examination. He attributed the favorable results to the following points in the technic of the operation: 1.

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Resection of the bone to bring the divided nerve-ends together; (2) protecting the nerve from being involved in the union of the bone by the intervening cushion of muscle tissue; (3) apposition of the nerve-ends by through-and-through sutures instead of uniting them merely by the sheaths, and the use of a tension suture to relieve the approximation suture.

**Operation on Hip-joint Without Shortening.**

Dr. R. P. Robinson, Ottawa, illustrated the subject by the citation of two cases. One, a little girl four and a half years old, with a tuberculous abscess of the hip. Incision was made where the abscess pointed—on the outer side below the great trochanter, and a pint of pus emptied. Special care was taken to preserve all the shreds of periosteum and to stretch those shreds along the space recently occupied by diseased bone up to lower part of the acetabulum, where they were stitched to the periosteum raised from the ileum at this point. The overlying muscles and fibrous tissue were well buckled over the diseased area. The remainder of the wound was left open, dressed with asceptic gauze and allowed to heal by granulation. Fifteen pounds extension was used for two weeks, then moderate extension for four months longer, and not allowed to walk for six months after the operation. The wound healed in five weeks, gentle movements were kept up daily after the second week. A new joint has been formed, no shortening, and neither lordosis nor tilting of the pelvis. Skiagraphs of the joint were exhibited. A similar case in a young lady aged seventeen was operated on with equally good result, but recovery more prolonged. The points emphasized were the preserving of all existing portions of periosteum, and union to adjacent periosteum, to cover the periosteum with muscles and fibrous tissues, and to maintain extension.

**Operation for Perforated Typhoid-ulcer.**

Dr. Hutchison of Montreal presented a report of five cases operated on for typoid perforation. The fifth case only was successful. In it the operator used the left oblique incision. He believed with increased experience many of these patients could be saved. The rate of recoveries with operation was now twenty per cent.

**President's Address.**

Dr. W. H. Moorehouse, London, extended, on behalf of the medical fraternity of London, a most hearty welcome to the Association. He also tendered, on behalf of the Association and city, fraternal greetings to delegates and visitors from abroad. He outlined the aims of the Association as follows:



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1. The cultivation of medical ethics. 2. The advancement of medical science. 3. The protection of the profession against outside aggression. "Genius consists chiefly in an infinite capacity for taking pains," is the ideal which should pervade the medical profession above all other vocations. The intermingling of men of widely varying capacities and standards begets a mutual feeling of enthusiasm and confidence. The occasional fellowship of men laboring for a common object, viz., the alleviation of human suffering and the conquering of disease, affords an inspiration without which the medical profession would suffer both in enthusiasm and resources. Tracing the ancestry of medicine, our profession has both a royal and a priestly origin. He advocated culture as well as skill on the part of the profession, if it is to maintain its claim to being regarded as a "learned profession." He recommended guarding well the portals of entrance to the profession by the maintenance of high standards of matriculation, a requisite, he was proud to say, in which Canada stood in the foreground. He regretted the obstacles which still stood in the way of the adoption of the Dominion Registration Bill, and hoped ere long to see the obstacles removed and the bill become law. He would like to see more Canadians entering the field of medical authorship, and keeping pace with the advance of literature in other spheres. The hospital accommodation in our cities was, he believed, well abreast that of other nations. The increasing use of patent medicines and proprietary preparations were becoming a menace to the unsuspecting public. He referred especially to the dangerous incorporation of alcohol and narcotics in these preparations. Could not our legislatures be induced to adopt the law of France which requires the makers of patent medicines to place the formula upon every patent medicine offered for sale. Lastly, the address touched on the duty of the medical man to himself. The adage, "There is plenty of room at the top," has been overdone. Many good and brilliant men perish in the ascent, or when the top is reached the strain is too great to maintain the position. He charged laxity in business methods with much of the failure in the practice of medicine. He also advised the pursuit of some hobby outside of medicine as a means of relaxation, lest in the prolonged overanxiety to save the lives of others the physician's own life may become a castaway.

### Eye Strain in Civilization and Medicine.

Dr. G. M. Gould, of Philadelphia, epitomized the clinical symptoms and lessons of eleven patients, whose cases he had studied,—DeQuincy, Carlyle, Darwin, Huxley, Brown-

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ing, Wagner, Herbert Spencer, Whittier, Parkman, and Nietsche. The common symptoms were in varying degrees, headache, insomnia, sick headache, biliousness, dyspepsia, indescribable suffering; there was inability to do literary work without producing these symptoms, and relief of these symptoms when use of the eyes was desisted from, for a day, or even a few hours. There was relief of all the symptoms at about sixty years of age, i.e., with the full establishment of presbyopia. This is a definite symptom—complex and clinical picture which differentiates the fundamental pathologic condition from that of any other disease. Each one of the patients and their physicians were intensely conscious of the strange mystery of the disease, and all repeatedly showed by letters, etc., the causal relation of near eye work to the symptoms. Each found relief in a great deal of walking and physical exercise. Three fundamental errors were made by their physicians, as well as themselves: (1) That the organ was diseased in which the symptoms appeared; (2) that intellectual labor caused these symptoms, when it was the optical part of it that did so; (3) that the "change of scene," and exercise gave the relief, when it was only the stopping the use of the eyes in reading and writing. The disease was functional; the loss in time and opportunity enormous; the resultant suffering terrible. The physiology of insomnia was set forth, and the way eye strain causes it; also the influence of it in creating dyspepsia, irritability and nervousness, or, sometimes, apathy and exhaustion. The ocular symptoms were described, when they existed, others direct and indirect, intercurrent diseases, etc. The fallacy of the explanations erroneously given of these patients' disease was set forth, and the method in which eye strain does cause it, explained at length.

### Causes and Treatment of Post Nasal Discharge.

Dr. Perry Goldsmith of Bellville. (This paper will appear in THE CANADIAN PRACTITIONER AND REVIEW.)

### The Address in Medicine.

The address in medicine was given by Dr. A. H. McCallum, of London, in place of Dr. James Stewart, of Montreal, who was absent on account of his serious illness.

### Two Cases of Hour-Glass Contraction of the Stomach.

Dr. Howitt of Guelph reported these cases. One of the cases was complicated by an ulcer on the posterior wall of stomach,

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the other by cancer. In the former there was a history of gastric distress of thirteen years' duration. After operation the patient made a complete recovery, and gained fifty pounds in weight. The other patient, seventy-three years of age, recovered and lived for nearly a year in comparative comfort, being able to take solid food until a short time before his death.

**A Lantern Lecture on the Open-air Treatment of Consumptives.**

Was given by Dr. Elliott, Superintendent of the Muskoka Sanatorium.

**Municipal Sanatoria for Consumptives.**

Dr. E. J. Barrick, Toronto. (See page 535),

Wednesday morning at St. Joseph's Hospital, Dr. Wishart of London performed Halsted's operation for removal of the mammary gland in the presence of a large number of spectators.

At Victoria Hospital, Dr. Ferguson of Chicago performed a thyriodectomy and Ferguson's operation for hernia.

Dr. McGraw of Detroit did the preliminary steps of gastroenterostomy with the elastic ligature in two cases, but both patients were two far advanced in disease to warrant completing the operation.

**The Country Doctor.**

Dr. J. S. Sprague of Sterling. (See page 527).

**The Inter-relation of Diabetes and other Constitutional States.**

Dr. Geo. F. Butler of Alma, Mich., referred in the outset to the error of fixing upon one condition as a test of disease rather than upon the general complex symptoms. In diabetes, glycosuria was merely an expression of metabolic instability dependent upon nerve disturbance. He then described the conditions affecting the nervous system, which might produce glycosuria, such as paretic dementia, locomotor ataxia and epilepsy, delirium tremens, the confusional insanities and febrile conditions. He then described in a very vivid manner the symptom complex of true diabetes, and insisted upon its central origin. In conclusion, he affirmed that most cases of diabetes were at first merely expressions of nutritional and assimilative instability; in consequence of the overstrain of the liver, adrenals, pancreas, spleen and kidneys, what were at first biochemic changes became permanent pathological lesions.

**The Treatment of Inebriates.**

Dr. Rosebrugh of Toronto: At the meeting of the Canadian Medical Association held in 1899, an economical

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scheme for the scientific treatment of indigent inebriates without the establishment of special public institutions, was by resolution, endorsed by the Association. This economical plan of treatment was subsequently submitted to the Premier and Provincial Secretary of Ontario, and at their request a bill was drafted embodying the various features of the scheme proposed. The bill as drafted was submitted to the Government during the session of 1901. From whatever cause the bill has not as yet been introduced to the Legislature, notwithstanding that it is understood to have the approval of the Premier. The bill was drafted with a view to combining maximum efficiency with minimum expense. To this end, it is proposed to combine the Massachusetts probation system with medical treatment, either in cottage hospitals, special wards in general hospitals or in the form of home treatment in suitable cases. At the outset, a medical inspector will be required to inaugurate the system. For the purpose of stimulating local benevolence the bill provides that the Government shall contribute thirty-three per cent. of the expense involved both in the equipment for and the maintenance of inebriate cases.

The bill has been endorsed by the Ontario Medical Association, the Toronto Medical Society, the Medical Press of Toronto, the Associated Charities of Toronto, as well as by a number of other influential public bodies. The Quarterly Journal of Inebriety gives the proposed bill its emphatic endorsation and adds, " We are confident that this bill will lead all the world as a new economic movement to diminish the misery and crime which associate and follow alcoholic drinking. . . . . its success is simply a question of the men to carry out its provisions."

As the Canadian Medical Association has endorsed the underlying principle of the proposed bill and as the bill itself has been endorsed by the Ontario Medical Association and as the latter body has appointed a representative committee to promote its adoption, we ask that similar action be taken by the Canadian Medical Association and we also ask that every member of the medical profession who is in a position so to do, will kindly give the movement a helping hand.

The matter was referred to the Executive Committee.

**Practical Considerations on Intestinal Anastomosis.**

Dr. McGraw read this paper. The question of anastomosis came in for consideration, he said, when the gut had become gangrenous. In his procedure he drew the gangrenous coil out of the abdomen far enough to permit him to unite the two limbs of the bowel at a point where they seemed healthy, by means of a rubber ligature. All of that part which was liable

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to slough was then fastened outside of the abdomen and the wound closed around it. The immediate result was a false anus, and in two or three days a new channel was cut by the rubber ligature and the false anus became unnecessary. It might then in time close spontaneously or be closed by the simple operation of inverting and suturing the ends. Stenosis from chronic obstruction were most commonly caused by tumors or cicatricial contractions. These obstructions furnished the largest quota of cases which required the formation of intestinal anastomosis. The differential symptoms incidental to pyloric obstruction were given, and the certainty of a positive diagnosis insisted on. The speaker maintained that a large percentage of pyloric stenoses were benign. A gastroenterostomy by the elastic ligature gave most satisfactory results in those cases. When the pyloric tumor was cancerous it did not forbid, but rather urgently indicated an operation. The relief would prolong life for from one to five years. Stenoses of the duodenum between the orifice of the bile ducts and the stomach, presented about the same symptoms as pyloric obstruction. Beyond this point bile would always be present in the vomit if the bile ducts were open. The distinctive symptoms of the stenoses of the ileum and colon were pointed out. The facts affecting the mortality following operations were discussed. With or without operation the cases became more and more hopeless, as the vomit became green and finally black.

The methods of making an intestinal anastomosis which claimed consideration were three, viz., the suture, the Murphy button, and elastic ligature. The writer's method by elastic ligature was described, and its superiority to the other two methods argued. Its advantages were (1) simplicity and quickness of application; (2) its aseptic quality, for the rubber filled the opening through which it passed so completely that no extravasation was possible; (3) the delay in opening the passage until the intestines have become well glued together; (4) the ability to make with it a communication at any desired part.

**Thrombosis of the Femoral Veins Following Aseptic Laparotomy.**

Dr. E. R. Secord, of Brantford, reported a case of this nature. The thrombosis occurred two weeks after an aseptic operation for double inguinal hernia, in which the wound healed by first intention. The thrombosis occurred on the left side, where there was much less handling and trauma of the parts, but where a truss has been worn for twelve years. The writer reviewed seventy reported cases of this complication, seventy-three per cent. of which were shown to be dependent on operations which produced conditions of lessened local tension. He

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discussed how this factor operated, and indicated the prophylactic and actual treatment. The writer stated in conclusion, that no one etiological factor was alone responsible for the occurrence of this complication; the role of infection in otherwise non-infective cases did not appear to be an important one; conditions of sudden decrease of pressure dependent on the operation, probably had a causative influence.

"The Address in Surgery" was delivered by Dr. A. H. Ferguson, Chicago.

**Brain Tumor in a Man Aged 67 Years.**

Dr. J. Wishart, of London, gave a report of this case. The first symptoms appeared in December, 1901, when the patient had an attack of tremor and spasm lasting for five minutes, affecting first the left thigh, and extending down the leg. Up to October, 1902, he had five other attacks, one attack affected the whole left side of the body. When seen by Dr. Wishart, November 3, 1902, memory was impaired, speech distinct, ankle-colonus present on left side and knee-jerk on both sides, Babinsky's sign absent, pupils and discs normal, pulse 89, temperature, 99, specified gravity of urine 1,020. Operation: Trephined the right side of the skull over the leg centre. Beneath the dura matter a tumor, feeling hard and osseous, was found and removed, measuring half an inch in diameter, afterward diagnosed by Dr. Neu as a psammonia. Patient recovered from the operation and improved mentally; by January the intellect was quite clear. Physically he made no progress. He was last seen May 14. His condition was one of great debility, but the mental condition was good. He died a few days ago. The prognosis in brain tumor is extremely grave. Victor Horsley says that only six per cent. of brain tumors are operable, and that, of that number, only a very small proportion recover. The ultimate fatal termination in this case was therefore not exceptional.

Dr. Wishart also exhibited a case of "Dislocation of the Elbow-joint Treated by Open Incision." Both bones were dislocated backward, and the lower end of the humerus fractured. He saw the case four months after the accident. The dislocation was unreduced and the fracture of the humerus ununited. He cut down and treated the joint by open incision. Result: The humerus has united, and joint movement fair. Pronation and supination are complete, flexion and extension are not quite complete.

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### The Relation Between the General Practitioner and the Specialist in Regard to the Treatment of Intranasal Disease.

Dr. J. Price Brown, Toronto, Ont., said that if the required treatment can be done by the family physician, by all means let him do it, but if not, he should refer the case to the specialist. Every practitioner should be able to examine the nose with the rhinoscope, both anteriorly and posteriorly, to discriminate between the normal and the abnormal, and to diagnose the principal forms of disease which may be found within the organ.

Many conditions he can treat successfully. The instruments he may require are neither very numerous or costly. They consist of head mirror, throat mirrors of different sizes, nasal spiculæ of different widths, curved or angular scissors, cotton applicators, tongue depressor, saws, snares, insufflators and atomisers.

There are certain conditions which simple treatment will relieve, but in which persistent and regular treatment is imperative ; particularly atrophic rhinitis. In many cases of subacute and chronic catarrh, the general practitioner can do all that is required. The author outlined the treatment of these affections.

### Idiopathic Peritonitis.

Dr. Geo. E. Armstrong recited a series of cases occurring in his experience, and others taken from the records of the Montreal General Hospital, in which the initial lesion could not be determined. In some cases the infective agent was the diplococcus of pneumonia, in others the staphylococcus, and he discussed the possible association of the condition with events occurring in the appendix, the fallopian tubes and uterus, in the lungs, the retroperitonial tissue, intestines and in the blood stream. Finally he noted the occurence of infection of the peritoneum after child-birth and gave the record of cases.

### Gastro-Enterostomy with Report of Cases.

Dr. Ingersoll Olmstead, of Hamilton. This will appear in THE CANADIAN PRACTITIONER AND REVIEW.

### Conservative Gynecology.

Dr. Lapthorn Smith, of Montreal, who was unable to attend furnished the following extract of his paper. He thought that in many cases what was called conservative gynecology should rather be termed incomplete work ; and that in no department of surgery was it more necessary to be thorough than in this. He had seen so many disappointing results in his own and in others hands, from trying to make half an operation do when the condi-

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tion present called for a whole one, that he felt less inclined to risk the success of the operation and his own reputation by doing anything less than was necessary. In about a dozen cases he had been obliged to open the abdomen a second time to remove the other ovary which had appeared healthy at the first operation, so that after having treated a patient for at least a year by every possible local and general means without relief, if her condition warranted an operation at all, he endeavored to obtain her consent to his doing what he thinks best for the complete success of the operation. If both ovaries were cystic or sclerotic he removed both. In about twenty cases he had left a small piece of the better ovary and one tube, in order to keep up menstruation, and these cases, so far, had been satisfactory. Two or three of the women had since become pregnant and several others had menstruated. In one case he adopted the suggestion of Dr. Howitt of Guelph, which was to scarify the thickened cortex of the ovary through to the stroma, when the tension was immediately relieved, and the incisions became open spaces. Although the space was filled up with exudation which eventually became scar tissue, still it never compressed the ovarian nerve tissue so much as the sclerosed capsule of the ovary. He also thought there was a future for Dr. Robert Morris' suggestion to introduce a piece of healthy ovary into a slit in the back of the broad ligament and hold it there with a stitch. Dr. Morris said that every one of the women on whom he had tried this ovarian grafting had menstruated and one had become pregnant. The author was not in favor of ignipuncture on account of the cicatrix which always followed burns, and which was especially dangerous when situated in tissue so rich in nerves. He had saved diseased tubes and repaired torn ones, and even left in place half of a tube after opening it up; but none of the cases turned out satisfactorily, and two of the patients died from infection of the peritoneum. He was in favor of leaving the uterus even when both tubes and ovaries had to be removed, because it helped to keep the arch of the pelvis supported, and besides, it was useful for the purpose of suspending the fallen vagina and bladder. As he had observed, when this latter condition followed a number of operations for the removal of large pus tubes, leaving a large space into which the uterus dropped, it was a custom in nearly every case to perform ventrofixation after removing the tubal abscesses. In vaginal hysterectomy he left the ovaries and tubes in all cases except those in which the uterus was the seat of advanced cancer. When a patient had many diseased conditions which could not be cured without an operation, he endeavored in every case to perform all the operations necessary at one sitting. With good nurses and well-

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trained assistants he had many times done dilatation, curetting, repair of lacerated cervix, anterior and posterior colorrhaphy, removal of both ovaries and tubes, ventrofaction, and removal of the vermiform appendix in an hour and twenty minutes. By tying all arteries before cutting them and the use of hemostats, not more than four ounces of blood need be lost, nor for the anæsthesia need more than four ounces of A. C. E. mixture be used.

### The Cardiac Complications of Influenza.

Dr. E. G. Wood, Nashville, said that only a want of recognition of the cardiac dangers can account for the common practice of administering such large and frequently repeated doses fo the coal-tar drugs in influenza. Months after an attack of la grippe a man still complains of unusual weakness; he is short-winded and sweats on slight exertions. Physical examination may be negative, yet he is suffering from cardiac weakness due either to functional or muscular disease of the organ.

1. *Pericarditis* is either primary, when it complicates influenza without other organs being affected, or secondary, where it occurs in association with pneumonia or pleurisy, the latter being more frequent.

In grippal pericarditis purulent effusion is comparatively frequent and myocarditis is commonly associated with it. Pericarditis may be present without symptoms.

2. *Endocarditis*—This occurs more frequently than usually supposed. It is rarely primary, and in the great majority of cases it is secondary to pneumonia. The infective agents are the pneumococcus, streptococcus, staphylococcus and the bacillus of Pfeiffer. Endocarditis may be (1) simple, (2) ulcerative. The simple may present the usual symptoms or may be unrecognized. Ulcerative endocarditis may occur during the attack, but appears more frequently in the convalescing period.

3. *Myocardial Changes.*—The bacillus of influenza elaborates a poison which causes degenerative changes in the myocardium, and when convalescence begins and the patient gets up the heart muscle is unable, under the increased strain, to perform it functions, and palpitation, dyspnea, weakness and collapse are complained of. These symptoms call for a careful examination. A small, feeble pulse, unusually slow or rapid, with a short, feeble first sound, a weakening of the second sound, and a weak cardiac impulse, with increased deep dulness make us think of myocarditis with dilatation.

The symptoms are attributed to the action of the influenzal poison on the cardiac nervous mechanism; either on the vagus or the cardiac ganglia. The principal functional cardiac disturbances are: 1, palpitation which is very common; 2,

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irregular action of the heart; it may occur during or after the attack; 3, bradycardia, which is the most dangerous, as it sometimes leads to fatal syncope; 4, tachycardia; this is more common than bradycardia. These functional disturbances are often difficult to diagnosticate from the organic affections; they usually disappear in a few weeks.

As a rule, in addition to significant, subjective symptoms, physical examination will show a feeble, diffuse cardiac impulse with a weak first sound, and in many cases an increased area of dulness. The strength and character impulse and sounds are much more important than the presence of a murmur or irregular rhythm.

In conclusion the author depreciated the use of coal-tar products, especially in patients past middle life.

**Amyotrophic Lateral Sclerosis.**

Dr. A. McPhedran of Toronto read a paper on this subject.

**Multiple Visceral Lesion.**

Dr. Benedict of Buffalo.

"An Exhibition of the Finsen Light" was given by Dr. C. R. Dickson of Toronto.

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Dr. Rudolf, of Toronto, returned from a visit to Europe, September 25th. He spent a month in Berlin.

Dr. Nattress is now living in the Annex of the Elliott House and using the office formerly occupied by Dr. Sweetnam.

Dr. Stevenson, of Toronto, returned early in September from England where he spent part of the summer.

Dr. Oldright has returned to Toronto, after spending the greater part of the summer in Muskoka.

Dr. A. Primrose, of Toronto, visited New York about the middle of September.

"A cottage hospital," which has a bright prospect for succes has been established at 31 Breadalbane St., under most skilled supervision.

J. A. Carveth & Co., who have been devoting their attention exclusively to the medical book trade for the past twenty years, have opened a branch (retail) store at 452 Yonge Street, corner College Street, where the students and doctors will find the most representative stock in Canada of British and American literature.

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# Editorials.

## CANADIAN MEDICAL ASSOCIATION.

The thirty-sixth annual meeting of the Canadian Medica. Association, which was held in London, August 25th to 28th, was, perhaps, more successful than was generally expected. This may not sound like a compliment to the officers of the Association who certainly did good work in connection with the preliminary arrangements. We heard not one word of hostile criticism. In what way then were expectations surpassed? We believe that the physicians of that beautiful western city, London, did some of the most magnificent work in the way of general management of the meeting and entertainment of guests that we have ever seen in connection with any medical society meeting. We really did not expect that such a limited number of men could do so much for an assemblage of three hundred.

London, in its medical aspects, is *wide awake and up to date.* Its physicians and surgeons are an able set of men, its hospitals are equipped and conducted most satisfactorily, its local medical society is active and progressive. Why do we not see more of the able London contingent at our Dominion and Provincial meetings? Of course Mahomet takes much pleasure in going to the mountain, but would like more reciprocity.

We regret that the attendance from provinces outside of Ontario was exceedingly small, including not more than about a baker's dozen. It was almost an Ontario medical meeting with some guests from the United States. What happened Montreal which was once almost the backbone of the Association? The meeting last year was held in Montreal, and this year Montreal sent four men to London. Was this the result of an unfortunate accident, or is there some reason not generally known? We cannot forget that Montreal has in the past done much to keep the Association alive while it was having a very precarious existence. We feel that we cannot succeed properly in the future without its active co-operation. Toronto furnished a fairly large contingent, numbering twenty-nine.

Among the entertainments provided for the members was an excursion to Springbank Park, about six miles out of London,

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on the afternoon of the 26th. From thence the members were taken to the Asylum for Insane, where a banquet was given at 7 p.m. On the morning of August 27th, the members were taken by special train to Walkerville, where they inspected the Canadian laboratories of Messrs. Parke, Davis & Co. They then went for a trip on the river on the steamer *Owana*, where luncheon was provided. After steaming about three hours the members disembarked at the Detroit laboratories, and after inspecting them were taken for a trolley ride through the principal residential streets of Detroit. They were entertained in the evening at a sumptuous banquet in the Russell House, after which they were taken back to London by special train. During the whole of this trip the members and their families were the guests of Messrs. Parke, Davis & Co.

On motion of Dr. R. A. Reeve, the Association agreed to invite the British Medical Association to hold its 1905 meeting in Toronto. The meeting of the Canadian Association for 1904 will be held in Vancouver, under the presidency of Dr. S. I. Tunstall, of that city. Dr. George Elliott, of Toronto, and Dr. H. B. Small, Ottawa, were re-elected Secretary and Treasurer, respectively.

## FREE LECTURES FOR THE PEOPLE.

Thirteen years ago the Board of Education of the City of New York established a course of free lectures by physicians and others, which has been a great success. Nearly one million people, it is stated, was the total attendance during the past winter. In many cases the physician delivered one special lecture of the course. Thus, for example, Dr. McDowell lectured twenty times, each time in a different school, on the subject of "vaccination." The lectures are in the evening and are largely attended by workingmen and their families. Dr. Jerome Walter, of Brooklyn, says:

"The subjects selected by the supervisor for me have been 'Foods,' 'Skin,' 'Clothing,' 'Bathing' and 'The Nervous System,' most of the time being given to the first four topics. It has been a pleasure to talk to the people on these subjects, for the audiences are attentive. They are also critical, because they have been educated by listening to

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series of lectures on various subjects, most of them illustrated by lantern slides. Most lectures on hygiene do not admit of much lantern illustrations, and yet the people like 'pictures' and many come to lectures to see, not to hear. A lecture on a hygienic subject must be usually terse and interesting, and above all, truthful in statement, otherwise it will be considered as 'stupid' and people will not come a second time to hear the lecturer. It is a curious fact that while *American Medicine* advocates popularizing the science of hygiene, and the State Board of Health of Michigan suggests the use of the term in the schools of 'Sanitary Science' instead of physiology, the study of hygiene is being discouraged in the public schools of some of our cities. The fashion now is in such cities to combine physiology with biology or zoology, giving less time to physiology than heretofore. There is quite a prevalent idea among educators that physiology is an easy subject to teach, and that any teacher can grasp the subject. Whether it is or not need not be discussed now, but hygiene is lost sight of. Yet the truths of anatomy and physiology are only of value to the pupil as they help to make clear the science and art of hygiene. Shall the study of hygiene in the schools be extended or retired? is a question that should invite discussion."

Of course the greater number of lectures were on Literature. History and Science. But, perhaps, none of the lectures were as valuable to the hearers as those on personal and public hygiene. The example of the Board of Education in Greater New York might well be followed in Canadian cities and towns.

## THE DUTY OF BEING WELL.

The *Christian Guardian*, of Toronto, in the course of a very sensible article on the subject of keeping well, expresses the opinion that it is a duty which a man owes to himself, his family, and the God that made him to preserve a sound mind in a sound body. A man's mental condition and spiritual state is shadowed by his physical condition.

The following quotation from Sydney Smith is given: "Happiness is not impossible without health, but it is of only difficult attainment. I do not mean by health merely an absence of dangerous complaints, but that the body should be in perfect tune, full of vigor and alacrity. The longer I live the more I am convinced that the apothecary is of more importance than Seneca, and that half the unhappiness of the

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world proceeds from little stoppages, from a duct choked up, from food pressing in the wrong place, from a vexed duodenum, or an agitated pylorus. The deception, as practised upon human creatures, is curious and entertaining. My friend sups late, he eats some strong soup, then a lobster, then some tart, and he dilutes these excellent varieties with wine. The next day I call upon him. He is going to sell his house in London, and retire into the country. He is alarmed for his eldest daughter's health. His expenses are heavily increasing, and nothing but a timely retreat can save him from ruin. All this is lobster, and when overexcited nature has had time to manage this testaceous encumbrance, the daughter recovers, the finances are in good order, and every rural idea excluded from his mind. In the same manner, old friendships are destroyed by toasted cheese, and hard salted meat has led to suicide."

The *Guardian* goes on to give some sound rules which may be abbreviated as follows:

1. Preserve a cheerful, hopeful outlook. "A merry heart doeth good like a medicine."

2. Eat wholesome food and live much in the open air.

3. Avoid nostrums as you would the devil, for the devil of diseases and ruin is in the most of them. Some patent medicines are good and useful, but we do not speak rashly when we say that in general they are the prolific cause of much misery and ill-health. By a method of skilful yet utterly diabolical advertising, the patent medicine maker stimulates the very disease that his nostrum is supposed to cure, and then, when the patient applies to him, he makes chronic what he first induced. This is the bitter fact which hundreds of victims can attest.

## A FAMOUS ACTION FOR DAMAGES.

The report of the death of Dr. W. S. Playfair, brings to mind a remarkable action for damages in England in 1896. In this case—Kitson vs. Playfair—the damages were claimed for an alleged breach of professional confidence. Mrs. Kitson, the wife of Mrs. Playfair's brother, placed herself under the care of Dr. Playfair for professional treatment. He removed from the uterus a mass which was found by microscopic examination to be a piece of placenta. Dr. Playfair, being fully assured that the placenta had been retained after a recent

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incomplete abortion, was certain that Mrs. Kitson had been guilty of immoral conduct as her husband had been in India for more than a year.

Under such circumstances he considered Mrs. Kitson unfit for respectable society, and explained the matter to his wife. Mrs. Playfair informed the world as to the alleged wickedness of her sister-in-law, with the result that the latter was in danger of becoming a social outcast. As a consequence Mrs. Kitson brought against Dr. Playfair an action for damages. The jury returned a verdict against Dr. Playfair for sixty thousand dollars. After a time the amount was reduced by mutual agreement to forty-seven thousand dollars. The *British Medical Journal* tells us that opinions were divided as to the merits of the case, but not the slightest stain was left on Dr. Playfair's professional character. Does the *Journal* mean that his conduct was justifiable?

The matter should be considered from two standpoints. First, the question of ethics: has a physician any right to reveal a secret of this sort which he has learned in a purely professional way? Was Dr. Playfair correct as to his opinion beyond a shadow of doubt? He asserted positively that the piece of placenta removed was comparatively fresh. On the other hand it was contended by able and competent obstetricians that the substance removed might have been the result of a conception eighteen months before, being part of a blighted ovum. With our present lights we can scarcely see how any one can say that this was impossible.

Dr. Playfair was one of the world's greatest teachers of obstetrics in the last century, and also one of Great Britain's most reputable and most highly respected physicians. In addition he was generally supposed to be possessed of exceptionally good judgment. Such facts, however, should not influence our opinions as to his actions with reference to Mrs Kitson. Even were he correct in his opinions as to her condition his conduct in divulging her secret was grossly unprofessional; while if he were wrong (which we must consider possible) his conduct was not only unjust but absolutely cruel.

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# Personals.

Dr. Chas. E. Duncombe, of St. Thomas, returned from Great Britain, August 21st.

Dr. Bedford Richardson, of Toronto, spent the month of August at Bala, Muskoka.

Dr. Gowan Ferguson, of Great Falls, Montana, paid a visit to Toronto early in September.

Dr. J. T. Clarke, of Toronto, was married to Miss Malcolm, of Kincardine, September 9th.

Dr. Jerrold Ball, of Toronto, returned from his visit to Atlantic City, September 8th.

Dr. Helen MacMurchy, of Toronto, spent the month of August in the Thousand Islands.

Dr. S. M. Hay, of Toronto, returned from Caprington, Port Sandfield, Muskoka, September 8th.

Dr. C. R. Cuthbertson, of Toronto, returned to his home, September 1st, after a visit to California.

Dr. Holford Walker, of Toronto, spent a part of August and September among the Caledon mountains.

Dr. B. E. Hawke, of Toronto, left September 18th for New York, where he is engaged in post-graduate work.

Dr. E. Herbert Adams, of Toronto, returned to the city, September 10th, after spending a holiday on Grand Manitoulin Island.

Dr. Dame, of Toronto, has gone to Europe for special work in eye and ear. He will stay in London for a time, and then go to Vienna.

Dr. G. A. Peters returned to Toronto, September 7th, after spending a few weeks at Scarboro' Beach, on the Coast of Maine.

Dr. W. W. Ogden returned to Toronto, September 1st, after spending the greater portion of the summer at Caprington, Muskoka.

Dr. Arthur W. Mayburry, 253 Spadina Avenue, Toronto, has returned from Great Britain and resumed his special practice, nose, throat and chest.

Dr. Campbell Meyers, of Toronto, spent a portion of his holidays at Bar Harbor on the Atlantic Coast. He also attended the Polo tournament at Newport.

Dr. H. B. Anderson, of Toronto, is recovering his strength after his attack of enteric fever. He left for Bay of Bays, Muskoka, September 14th, and expects to remain there until the latter part of October.



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# Obituary.

## DEWITT HENRY MARTIN, M.D.

Dr. D. H. Martin (Tor. '65) died at his home, Kincardine, July 19th, aged 66.

## STUART McARTON, M. C. P. & S., ONT.

Dr. S. McArton, a graduate in medicine of 1876, and a practitioner of Paisley for many years, died, August 3rd, after a brief illness.

## WILLIAM SMOULT PLAYFAIR, M.D., LL.D., F.R.C.P.

Dr. Playfair, of London, England, died in St. Andrews, Scotland, August 13th, aged 67. He was best known to Canadians through his admirable text-book on obstetrics, which, for many years, was the most popular work on that subject in the Dominion. He was in failing health for some time. He underwent a serious operation last year, and was struck down by apoplexy a few months ago in Florence. After recovering sufficiently to travel he was brought to St. Andrews in the latter part of July, but died in about two weeks after reaching that city.

## SAMUEL RICHARDSON, B.A., M. C. P. & S., ONT.

Dr. S. Richardson, of Detroit, died in St. Mary's Hospital, of that city, September 3rd, aged 58. He graduated in arts, Toronto University, 1874, and after receiving his medical education in the Toronto School of Medicine, passed his final examination before the Ontario Medical Council in 1875. He then practised in Essex County, Ontario, for about ten years. He removed to Detroit in 1885, and was a successful practitioner in that city until the time of his last illness. He was born in Scarboro, Ont. John Richardson, M.P.P., for East York, it a brother.

## W. H. CORFIELD, M.A., M.D., F.R.C.P.

Dr. Corfield, the eminent Professor of Hygiene, University College, London, died at Marstrand, Sweden, August 26th, aged 60.

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# Book Reviews.

**Diseases of the Heart and Arterial System.** By ROBERT H. BABCOCK, A M., M.D., Professor of Clinical Medicine and Diseases of the Chest, Co lege Physician and Surgeon, Chicago, etc., etc. With three colored plates and 139 illustrations. New York and London: D. Appleton & Co., 1903.

The author, in the preparation of this work, has endeavored to present the subject in a simple, practical fashion to meet the needs of the student and practitioner of medicine. Special attention has been paid to treatment, and this part of the subject will be found more detailed than is the case in most books dealing with diseases of the heart.

Section I. Deals with the diseases of the pericardium.

Section II. Diseases of the endocardium.

Section III. Diseases of the endocardium.

Section IV. Treats on the cardiac neuroses or functional diseases of the heart.

Section V. Diseases of the arterial system.

Some of the chapters are especially strong, and well and carefully written. The phraseology has been kept simple and free from needless technicalities, while in terminology an attempt has been made to employ the terms which are in most familiar use among English-speaking physicians.

We commend this work to the attention of all practitioners of medicine who desire to keep in the advance guard.

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**Diseases of the Ear.** A Text-book for practitioners and students of medicine. By EDWARD BRADFORD DENCH, Ph.B., M.D., Professor of Diseases of the Ear in the University and Bellevue Hospital Medical College. In one octavo volume of 718 pages, with 15 plates and 158 illustrations in the text. Third edition, revised and enlarged. D. Appleton & Company, New York and London, 1903.

This edition of the well-known author's work has been brought well up to date in almost every particular.

Section I. is devoted to the anatomy and the physiology of the ear. It is rather doubtful whether the information here given might not more profitably be obtained from some of the standard text-books devoted exclusively to these subjects. One's knowledge of anatomy is nothing if not accurate and in detail.

Section II. treats of the diseases of the conducting apparatus, and here much valuable information is given. For example: the use of the syringe in the removal of foreign bodies from the ear, is sound advice. Again, in the removal of impacted cerumen, the author advises complete removal at one sitting.

In Section III. diseases of the middle ear are also handled in a masterful manner.

In acute catarrhal otitis media, the author advises the complete relief from pain for five or six hours, by the use of morphine, coupled with local blood-letting for relief of the inflammation.

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Section III. gives a succinct account of the surgery of the conducting apparatus, including its clinically important mastoid operation, whilst Sections IV. and V. deal respectively with the surgery of intra-cranial complications of aural suppuration, and diseases of the perceptive mechanism, and Section VI. closes with a clear account of the complicating aural affections. Altogether the book is a safe and reliable guide for the practitioner and student, and should retain in an eminent degree its previous popularity. The book is handsomely gotten up and well printed on good paper.

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**Scheme for the Differential Testing of Nerves and Muscles for Use in Diagnosis.** By J. MONTGOMERY MOSHER, A.M., M.D., Clinical Professor of Insanity, Neurology and Electro-Therapeutis Albany Medical College; Attending Specialist in Mental Diseases and Physician to the Out-patient Department for Nervous and Mental Diseases, Albany Hospital. Illustrated. Albany, N.Y.: Brandow Printing Co., Fort Orange Press, 1903. Price, $1.00.

We have before us this little volume on Electro-Diagnosis. It is a very concise and accurate description of the diagnostic value of the electric current, the development of the muscle change, the determining of the degree in which that change has taken place, and its cause. Since tendon transplantation is becoming a factor in surgery, the usefulness of muscles and groups of muscles must be determined before the tendons should be transplanted. This can only be done by the electric current, and the little volume before us shows us the many points at which we can determine the action of muscles and groups of muscles and nerve action. Illustrations indicating the points at which the poles of the battery should be applied are very clear and distinct, and in fact are rather unique. It is a book that has opened up a somewhat new field, and has the first publication in English language with the diagrams. We heartily recommend the book.

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**Essays on Rural Hygiene.** By GEORGE VIVIAN POORE, M.D., F.R.C.P., Consulting Physician to University College Hospital, etc. Third Edition; 426 pages; 12 illustrations. Cloth, 6s. 6d. Longmans, Green & Co., Publishers, London, New York and Bombay.

The author laments, in these essays, that our large cities and towns are making Augean stables of our rivers and lakes, (which must serve succeeding generations for a water supply) leaving to posterity the task of Hercules. At present, the brunt of this evil is borne by the rural districts. Millions of dollars worth of manure is wasted each year by this foolish and extravagant system of sewerage which has largely arisen from the selfishness of the town-dweller, who cares little for agriculture, so long as the refuse is disposed of in the cheapest way, and the "city rates" are low.

Against the danger that village sanitation should follow "the fashion," the voice of the writer is lifted up and he endeavors

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to show how unsuited urban methods are for country districts. The time will soon come when each municipality must take care of its own refuse on its own premises, instead of passing it on to be a nuisance elsewhere.

The secret of the system he found for villages and country residences lies in the wonderful power of the soil of turning organic matter into food for plants—turning nature to fight nature, as he illustrated by the story of Brémontier's reclaiming of the French Landes. Each rural house to be securely wholesome, must have a direct connection with cultivable land.

When these methods are adopted the key may be furnished to the solution of the great problems of the unemployed and of the prevailing agricultural depression in Great Britain.

Although written chiefly for British readers, and dealing with questions much more pressing in European countries than in America, the book, which is in most readable style, is of great interest to students of sanitation and of political economy.

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**Portfolio of Dermochromes.** By Professor Jacobi, of Freiburg im Breisgau. English adaptation of text, by J. J. Pringle, M.B., F.R.C.P., Physician to the Department for Diseases of the Skin at the Middlesex Hospital. In two parts. London: Rebman, Limited, 129 Shaftesbury Avenue, Cambridge Circus. Toronto: Wingate, 186 Adelaide St. W.

Part I. of the Dermochromes contains twenty-four plates and forty-five illustrations, and Part II. eighteen plates and thirty-two illustrations. These plates are made by a new process called citochromy. We are not aware just what this word means, but the results obtained by the process are absolutely unique. We have never seen illustrations of skin lesions their equal, and they are so true to nature, and the coloring is so accurate that a clinic could easily be delivered from these illustrations alone, and the disease easily recognized on the subject. The text is brief, it does not go into old matter, but it accurately describes the lesion, gives the diagnosis and prognosis, and devotes considerable space to treatment. It would be more than superfluous to attempt to pick out any individual lesion to comment on, because the coloring is so nearly perfect that one would have to elaborate on all. Skin lesions occur in the practice of all, and an atlas of this kind with these charming illustrations so true to nature, should be in the possession of all physicians who desire to keep up to date. The illustrations in this volume are so different from those we are accustomed to see that one may be excused from becoming very enthusiastic. We desire to congratulate the Rebman Co., on the publication of this volume, and the accuracy with which the skin lesions have been depicted. The press work and paper undoubtedly add a great deal to the general appearance of the illustrations, and we can see that no item of expense has been spared in the way of presenting the volume in its best form.

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# Miscellaneous.

## COUGH IN PULMONARY PHTHISIS.

By J. LEFFINGWELL HATCH, B.Sc., M.D., F.R.M.S., London.

As broods silence back of sound, so also stands designer back of design, and the logical mind of man has ever thus traced a presumptive relation between the thing observed and its supposed origin, and called them respectively cause and effect.

Thus in medicine we look from symptoms to a cause, and if post mortem we find a definite lesion we too often jump to the conclusion that it must be the very thing we are looking for, and are apt to forget that back of this change of structure lingers the first real cause in perverted physiologic function.

One of the best known and oldest symptoms, and one which occurs from diverse causes, is cough, and this, with another, almost as common and well known, dyspnea, go hand in hand among the various affections of the respiratory organs.

In pulmonary phthisis cough is usually the first symptom manifest and lasts throughout the disease, but the cause is not the same in each stage and consequently requires careful study and varying treatment in the different stages.

The earliest physiologic alteration is a hyperemia usually occurring at the apices. This congestion of the capillaries is the causal irritation that brings about the cough reflexly through the medium of the nervous system. Here a nerve depressant and vaso-motor dilator is indicated rather than an analgesic and expectorant.

In the next stage of consolidation the hepatized tissue acts as a foreign body and likewise reflexly brings about a useless cough in the vain effort to get rid of itself. In this stage resolution should be established by means of an alterative and the nerves quieted by a sedative.

In the third stage where the tissue has undergone cheesy degeneration and broken down, it really is a foreign body that causes the cough, which can only be relieved by its removal, hence we give stimulating expectorants in combination with sedatives and analgesics to relieve the nervous spasms and consequent pain.

The sum total of the forces of a consumptive is at the most a low figure, and we try to keep this up by a high diet that often deranges other organs, whereas regard to the conservation of force by lessening the cough will give the same result without detriment to other emunctories.

To allay cough, then, has been the aim of therapeutists from

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time immemorial, and of the different concoctions and mixtures that have been vaunted and foisted upon long-suffering humanity their name is legion.

Probably the greatest boon that ever came to us in the form of medicine was opium, and some form or other of this drug has been and always will be used to a great extent as an ingredient in every cough mixture.

Of the alkaloids of opium, morphia has probably been the most popular until recent years, when codein has claimed considerable attention and threatened to usurp its place; but since the discovery of heroin, by Prof. H. Dresser, of Elberfeld, Germany, in 1898, this has been made impossible, and the new analgesic after careful study both in Europe and America has found great favor among practitioners, especially in diseases of the respiratory organs.

In the fall of 1900 my attention was called to Glyco-Heroin (Smith), and I tried a sample bottle on a patient with such gratifying results that I determined to make further observations.

What these results were, the clinical record below tells more graphically than worded phrases of description could hope to do.

It does not nauseate, and can be given in teaspoonful doses as often as every two hours to adults, dose of course being graduated in children according to the age, although they tolerate heroin where opium would produce untoward results.

The greatest advantage this preparation has over all others lies in the fact that it does not contain anything that deranges the stomach, and can be given indefinitely without the patient turning against it. The majority of cough-mixtures contain sugar, which is bound to undergo more or less fermentation; opium, which constipates and affects respiration, and belladonna, which checks the secretions, so that if they are able to lull the patient into oblivion of his condition for a few hours on account of the large amount of narcotic they contain, he awakes to find a stagnation of secretions with renewed paroxysms of coughing, and "pushing the mustard to fanaticism" for further relief he eventually becomes a slave to opium.

I have used Glyco-Heroin (Smith) now in over fifty cases, with the unvarying result that it relieved the cough, reduced the temperature, increased the volume of respiration, and allayed the night sweats, while at the same time it did not derange the stomach or cause constipation, did not produce vertigo nor nausea, never weakened the respirations, nor caused deleterious effects upon the heart, so that I can frankly say that without doubt we have in this compound the ideal cough mixture for the cough of phthisis pulmonalis.

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The cases that I here quote I have selected from a series of fifty-three, with the idea of not citing cases so near alike as to produce monotonous repetition, no matter how gratifying the results.

As has been well said of this preparation, it is not only a true pharmaceutical product but an ethical one as well, and one that the physician can use understandingly, as its composition and physiologic action are well known.

Unfortunately all good things are sooner or later imitated, and something put forward as just as good but cheaper, and Glyco-Heroin (Smith) is no exception to this rule, so if results are not satisfactory, substitution must be at the bottom of it.

### Observation One.

Mrs. Marie B., aged 32, father living in good health, mother died several years ago, does not know cause of death.

She was thin, and her complexion was of a muddy, yellow color when first examined. Weight 122½ pounds; pulse, 100; temperature, 100° F. Respirations 36 and difficult.

She had a fairly good appetite, but was constipated. She menstruates regularly, but has coughed and expectorated for two or three years. Sputum analyzed showed the presence of tubercle bacilli. She had a pleurisy eight years ago the result of a cold, both lungs were affected since then, crepitant rales throughout, and areas of congestion here and there.

Her sputum had been tinged with blood, but she has never had any hemorrhages.

I gave her an emulsion of cod liver oil, and Glyco-Heroin (Smith) in teaspoonful doses every two hours. The cough was relieved from the first and after four months had entirely disappeared. The lungs cleared up, no more rales or areas of congestion, and she gained ten pounds in weight.

### Observation Two.

Miss E. M., aged 32, unmarried. Had been ill six months before coming to me for treatment, and a diagnosis of tubercular laryngitis had been already established by someone else.

There was dullness on percussion over nearly the entire area of both upper lobes of the lungs, she had night sweats, fever, and a persistent cough, raising considerable. She was pale and emaciated, highly excitable and nervous; pulse, 110; temperature; 102° F., respirations, 26.

Microscopic examination of the sputum revealed the presence of the tubercle bacilli.

On laryngoscopy I found an extensive ulcerative process on the posterior wall of the larynx just above the vocal cords, and both epiglottidian folds were congested and swollen.

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Besides the local treatment for her throat trouble and constitutional care I gave her Glyco-Heroin (Smith), one teaspoonful to be taken every two hours.

There was marked improvement after the first twenty-four hours, and she said she had slept well through the night, had coughed scarcely at all, freedom from which distressing symptom she had not enjoyed for months.

The temperature gradually went down to normal, the night sweats ceased, and in little over one month's time the cough had left her entirely. The ulcer in the larynx was finally healed, which relieved her hitherto painful deglutition ; besides this she gained flesh and strength, due undoubtedly, to the conservation of force which the mitigation of the cough afforded.

OBSERVATION THREE.

Mrs. I. T., aged 35, had one sister who was tuberculous. She had been ill for over ten years when she came to me ; previous to her bad feelings she had been operated on for prolapsis uteri; about five years ago first noticed that her abdomen was increasing in size. This proved to be due to a fibroid tumor which grew to such an extent that her abdomen measured thirty-seven inches in circumference. She had coughed for about six years, but her aspect was fairly good ; she weighed 137 pounds, but was nervous and impressionable ; respirations were 20, pulse, 83 ; temperature, 101.1° F.

Physical examination revealed numerous moist rales on the right side, and her sputum on microscopic examination showed the tubercle bacilli.

She was given Glyco-Heroin (Smith) in conjunction with constitutional treatment. and received local electrical treatment from the hands of a specialist. At the end of eight months her abdominal measurement was reduced to thirty-three inches, cough and expectoration had entirely disappeared, as well as the moist rales, and her temperature, pulse and respiration became normal.

Whether her cough was entirely due to the lung trouble or was partially due to the uterine difficulty I was unable to determine, but granting both factors as a cause Glyco-Heroin (Smith) cured it.

---

SANMETTO ENDORSED AS THE MOST VALUABLE REMEDY IN KIDNEY, BLADDER AND URETHRAL AFFECTIONS.—Sanmetto is a valuable preparation. Indeed, I have found it one of the most valuable remedies in the treatment of gonorrhea and all kidney and bladder affections, either acute or chronic, and can endorse same to the medical profession.

CHAS. E. BARMM, M.D.

Indianapolis, Ind.

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**Bovinine in Consumption.**

From the prevailing disbelief, which was almost a despair, the recent knowledge that consumption is curable is rapidly disseminating.

This is not due of any miraculous medical specific that has appeared, or ever will appear; nor to climate alone, for cases originate in California, Colorado, the Riviera, and the most noted resorts of the Swiss Alps; but it is accomplished by the rapid restoration of tissue-waste with nutrition that contains all the elements of the human body, in right proportions and ready for immediate assimilation, to enable the system to build faster than the malady can break down.

While it has been abundantly proven that the tubercle bacilli is often the means of perpetuating consumption, it never has been satisfactorily demonstrated that it is the sole cause of the disease. No doubt every human being in the civilized world is sooner or later exposed to this germ, but only a small minority are susceptible to its infection. The great majority are immune by virtue of normal vigor, normal nutrition, which does not furnish the nourishing nidus for this bacillus.

The long and feverish search for a drug that shall demonstrate its right to be called a specific has been almost abandoned. The thousand and one alleged "cures" or specifics for consumption have all proved cruel delusions. Tuberculin is a sorry example Creosote, cod liver oil, guaiacol, and all their derivations and modifications have signally failed. Recent searchers have confined their efforts mainly to the field of antagonizing serums, but instead of reaching favorable results, it looks as though the whole serum theory would, ere long, be abandoned as a mistake.

There is no positive cure for consumption outside of an element or influence that restores normal nutrition that enriches the blood and builds the tissues. This being accomplished, nature does the curing. The sooner we all accept this demonstrated fact that general vital recuperation, by whatever means it may be accomplished, is the only cure that is scientific that has ever been known or ever will be known, the less time we will lose in conducting the battle royal with this fatal scourge.

Patients who die of Tuberculosis starve to death. Those who recover from Tuberculosis are fed to health—cured by feeding. Feeding, however, is not necessarily nourishing, no more than eating is assimilating. Thousands of victims of this wasting disease starve with stomachs full, and plenty more within reach. There is no dearth of elegant and costly viands —it is availability they lack. They call for an exhibition of vito-chemic force which the consumptive's stomach does not

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possess. Bovinine does nothing of the kind. It is living tissue pabulum in natural solution and instantly available. It responds at once to the demands of the starving organism.

Life nourishes life, cell rebuilds cell, and the life of all cells is the circulating, vivifying fluid, the sap in the tree, the blood in the animal. Plants transmute crude inorganic matter into organic forms; animals take up vegetable organisms and advance them to a higher stage. Each advance is an intensification, a rise in the vital scale, a further refinement of cell structure and cell function.

Bovinine quickly and permanently restores the broken constitution of the consumptive by supplying the vitalized protoplasm, living cells, ready for instant appropriation, without taxing the digestive system. It builds up the demoralized system by furnishing the ready-prepared pabulum, and by resting them, restores the digestive and assimilative functions. The victims of consumption starve because the vital organs tire out and give up the struggle, surrendering to the forces that disintegrate and destroy.

Bovinine bases its claims wholly on its direct and positive influence in restoring vital tone, flesh and strength to the debilitated system. It begins at the foundation by restoring the blood. It supplies the shattered and wasted organism with exactly what it must have in order to recuperate, and supplies it in a form that is immediately available.—*The Bovinine Co., 75 W. Houston St., New York City.*

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**An Interesting Clinical Case.**

X. a white woman, 22 years of age, was taken into the hospital on account of syphilitic skin disease (roseola papula); a blennorrhagic vaginitis of most violent description with strong congestion of the mucous membranes of the vagina. The latter was of violent hue, somewhat brittle, and yielded abundant secretion of a greenish yellow pus, which showed under bacteriological examination abundant colonies typical of gonococcus, diplococcus and other varieties of bacteria. The gonococci infection reached to the neck of the uterus whose tissues suffered from the same degeneration as the vagina. Above the mouth of the neck—from which a greenish yellow and somewhat thick pus oozed—was a syphilitic ulcer of the size of a dime, clean at the bottom, livid in color and rather deep.

Upon careful examination the patient was found to be pregnant in the third month; and, from the start, was subjected to energetic treatment as a serious case.

Under the treatment employed she improved rather well;

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**"MALTINE"** by virtue of its consistency, agreeable taste and inherent value as a reconstructive and digestive, is admirably adapted as a vehicle and an emulsifying agent. There is scarcely a remedy prescribed whose specific properties will not be promoted and strengthened by being combined with it for administration and absorption into the system. The great popularity of the combinations of **"Maltine"** with Cod Liver Oil and with Cascara Sagrada—two remedies usually so difficult to administer—illustrate its usefulness in rendering medicaments more palatable, attractive and efficient.

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but, though the blennorrhagia was not cured, the syphilitic manifestations of the skin disappeared, and the ulcer at the neck improved somewhat, until confinement which took place at the eighth month, five months after her admission.

The confinement was normal. However, the patient was attacked by a great flux and suffered a complete laceration of the right side of the neck; an incomplete laceration of the left side; an incomplete laceration of the rear wall of the vagina; and a two-thirds laceration of the perineum. The placenta was removed at once; ample warm washes of a 1 per cent. solution of permanganate of potash were applied and the uterus was stimulated by massage, but remained inert. All this was reported to me by the house physician. I arrived at the hospital four hours later in company with the well-known gynecologist, Dr. Mendez Capote, who, upon having examined the patient, decided to sew up the lacerations. He washed out the vagina and uterine cavity completely; adjusted with the scissors the edges of the lacerated tissues; sewed up the wounds and touched the ulcer at the neck with the cauterizer; then he gave another wash and plugged with iodoform gauze.

When the patient was on the operating table, she had fever, 38.4°C. At 5 p.m. the fever was at 39°; then the vaginal plug was taken out and a great intra-uterine wash of a one-half per cent. solution of permanganate was applied very hot in a quantity of five liters. The fever was at 40° throughout the night, and washes were given every four hours.

The following day, at 8 a.m., temperature 40°, same local treatment. The fever lasted all day, falling to 39° by the wash, but rose again to 40°.

The day thereafter, fever at 41°; same treatment with more vaginal washes of bichloride of mercury, before the uterine washes; the fever keeps on at 41°.

On the next day at 8 a.m., (temperature 41.5°), I took out the stitches made on the day of confinement, washed well both uterus and vagina, dried the latter with carbolated cotton and conveyed into the uterine cavity eight grammes of pure hydrozone, taking care that this liquid should flow towards the vagina, into which I poured about 60 grammes of the same liquid and drained the uterus with simple gauze saturated in hydrozone, while the vagina was drained by the same means.

From that time on the fever declined slowly, and at 6 p.m. it was apyretic. The fever did not return and the patient's cure proceeds without further difficulty.

This case, which is interesting by itself, proves of great value in setting forth two points, viz.:

1. That, although the intra-uterine injections of pure hydrozone may be dangerous, it can be applied if care is taken to keep the neck dilated as much as possible.

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| Chloroform | ½ min. |

To each fluid drachm.

**USES.—Recent and Chronic Coughs, Acute and Chronic Bronchitis and allied affections of the respiratory tract**

**Dose.**—One to two teaspoonfuls, as necessary, three or four times a day. Children according to age.

An admirable preparation that stops conghing, allays irritation and assists expectoration. It **does not nauseate** or **constipate**, and can be given with perfect **safety to a patient of any age.**

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2. That in this case the superiority of hydrozone over the other treatments of puerperal septicemia, in connection with gonococcia, is indisputable; and that this splendid result should encourage repetition of its application.—Dr. Matias Duque, Director of the San Antonio Hospital, Section of Hygiene. Abstract from the *Revista Medica Cubana*, April 15th, 1903.

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SANMETTO IN DIFFICULT CASES OF CYSTITIS, PROSTATITIS, INCONTINENCE, IMPOTENCY AND HEMATURIA.—I have used Sanmetto very extensively in my practice for years, and as evidence of my perfect satisfaction will say that I continue to prescribe it in all difficult cases. In cystitis, prostatitis, incontinence, impotency and many cases of hematuria I use Sanmetto with assurance of perfect success. In my female practice I find it the remedy par excellence, especially as a sexual tonic and a mammary rebuilder. I shall continue its use in typical cases. O. L. HUDSON, M.D.

Princeton, Ind.

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I USED Pepto-Mangan (Gude) last spring in the case of a patient who had suffered for a number of months with chronic gastro-intestinal catarrh and severe diarrhea, and had been perceptibly reduced in strength and weight. The result was very encouraging, and since then the preparation has been continued and the patient has distinctly improved. The expectations of a complete cure of her trouble are very good. In my opinion this preparation is a very commendable remedy in all conditions of weakness, because it is so readily digested and so well tolerated. DR. G. KIMMIG.

Bad Petersthal, Schwarzwald.

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The general results of the recent discussion in this paper on the relative value and safety of various antiseptics derive confirmation from a monograph which we have received from the Pasteur Institute of Paris. We described the volatile or essential oils of plants as the safest—and the most pleasant, might have been added—of antiseptics for direct human use; that of eucalyptus holding a very high place. A couple of professorial members of the Association of Analytical Chemists of the Pasteur Institute have been studying Listerine, which is named after the great English surgeon. Listerine is a mixture of the essential oils of thyme, eucalyptus, baptisia, wintergreen and mint. It has relatively non-toxic properties peculiar to these oils, but the Parisian savants have brought out the important fact that the mixture of oils is much more potent than any one of them singly. It attacks more than one joint in the bacterial armour. Carbolic acid—used so much mainly because it is the original antiseptic employed by Lister—is 146 times as toxic as Listerine.

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# The Canadian Practitioner and Review.

VOL. XXVIII. TORONTO, NOVEMBER, 1903. NO. 11

## UNIVERSITY OF TORONTO

### FACULTY OF MEDICINE.

### Opening Exercises of the First Session after the Amalgamation of the Medical Faculties of the Universities of Toronto and Trinity College, and Ceremonies in connection with the New Building.

(Medical Faculties of Toronto and Trinity Universities.)

The formal opening of the Laboratories which have recently been erected by the University of Toronto in the Queen's Park took place on October 1st, when Professor Sherrington of the University of Liverpool, England, delivered an inaugural address, and the buildings were formally declared opened by President Loudon.

There were other distinguished guests present, of whom may be mentioned His Honour, the Lieut.-Governor, the Hon. Mr. Harcourt, Minister of Education of Ontario, Professors Welch and Osler of Johns Hopkins University, Professor Keen of Philadelphia, Professor Porter of Harvard, Professor Chittenden of Yale, Professors Roddick and Adami of McGill, Professor Barker of Chicago, Professor McMurrich of the University of Michigan, Professor Abbott of Philadelphia, Professor Goldwin Smith, Mr. Alfred Mosely and the Hon. Dr. Sullivan.

The various functions connected with the opening ceremonies included, in addition to the inaugural address by Professor Sherrington, addresses by the other guests of the University. Professor Sherrington's address was delivered on the afternoon of October 1st, the Dean of the Faculty of Medicine, Dr. Reeve, having previously entertained the visitors at luncheon. On the evening of the same day Professor Osler delivered the opening lecture of the session to the students. On the morning of October 2nd addresses were delivered to the students in the new lecture theatres; in the afternoon a special University Convocation was held for the purpose of conferring honorary degrees, and at this function the degree of LL.D. was conferred upon Professor Keen, Professor Welch, Professor Osler, Professor



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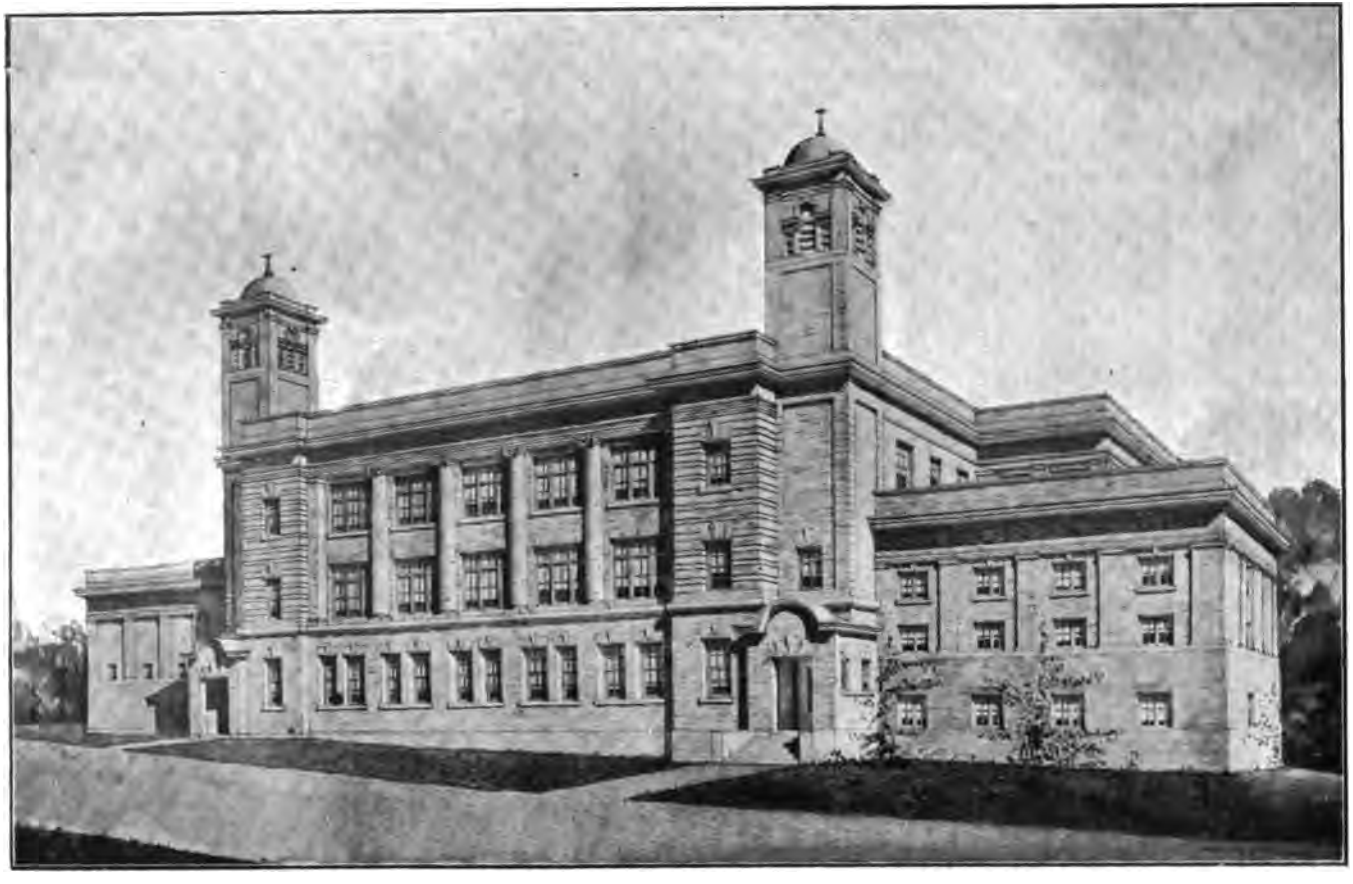

THE NEW MEDICAL BUILDING.

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Chittenden, Professor Sherrington, and, *in absentia*, upon Professor Bowditch of Harvard. In the evening a dinner was tendered by the Dean and members of the Faculty of Medicine to their guests.

### THE NEW MEDICAL BUILDINGS OF THE UNIVERSITY OF TORONTO.

The new buildings for the department of physiology and pathology of the University of Toronto, are the first to exemplify the unit system of laboratory construction proposed by Professor Minot, of Harvard University, and consequently an account of them may be acceptable to all who are interested in laboratory administration and construction.

The main features of the unit system, as outlined by Professor Minot, are all comprehended in the character of the laboratory "unit" room. This must, first of all, be no larger than is required to accommodate readily the maximum number of students whose practical instruction a single demonstrator can efficiently guide and control. It must also be of such dimensions that it can, at need, be made to serve as a museum, a library or reading room, or a small lecture room. The units, further, must be so placed with respect to one another, preferably in pairs or series, that, by the removal of the partitions separating them, rooms of larger dimensions may, when desired, be obtained at a minimum cost and in a short time. The dimensions of such a unit, as determined by Professor Minot, are 23 x 30 feet, and this room will accommodate twenty-four working students, which number, experience shows, is the largest that should be under the supervision of a single class demonstrator.

The system, as may be seen, offers the great advantage of elasticity, for a laboratory director may enlarge or contract, at will, or according to the needs of the occasion, the accommodation required for a class, a feature that does not obtain in any other system of laboratory construction. It has also other and not less important advantages. The cost of construction is less than in any other system, it adequately provides for the all-important question of light, and it permits of subsequent extensions and additions without disturbance of the original arrangements. It is also to be noted that the system provides for the formation of smaller rooms through the division of the unit.

All these points were thoroughly canvassed when, nearly two years ago, the medical faculty of the University of Toronto took up the question of erecting new laboratory quarters for physiology, physiological chemistry, pathology and public health, and discussed the various plans of construction offered

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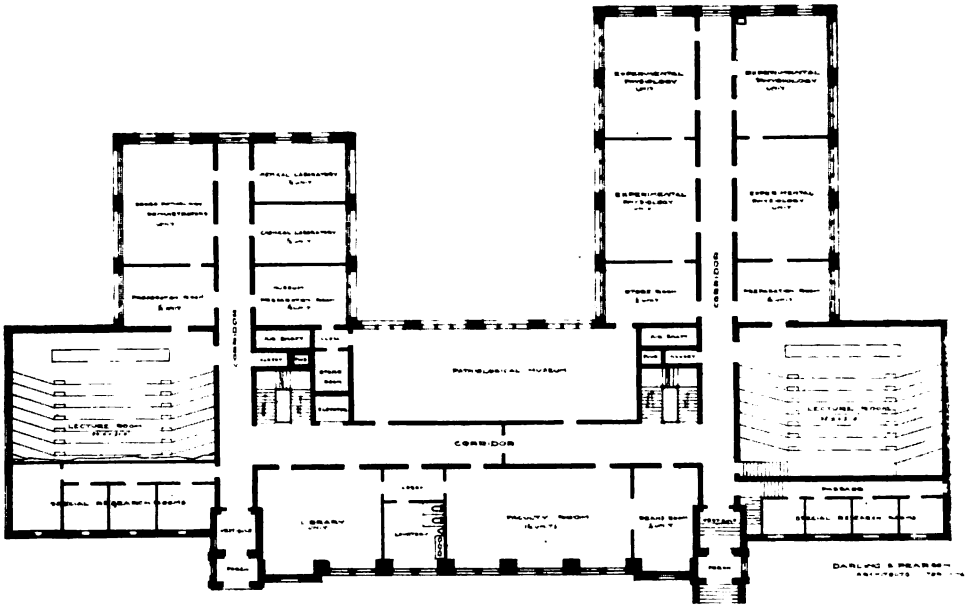
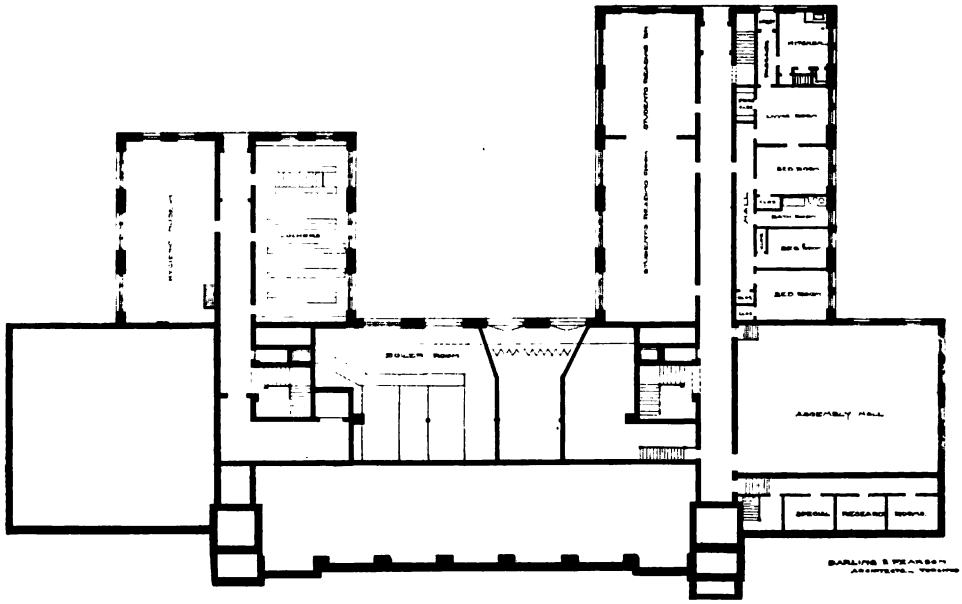



MEDICAL BUILDING TORONTO UNIVERSITY
GROUND FLOOR PLAN




MEDICAL BUILDING TORONTO UNIVERSITY
BASEMENT PLAN.

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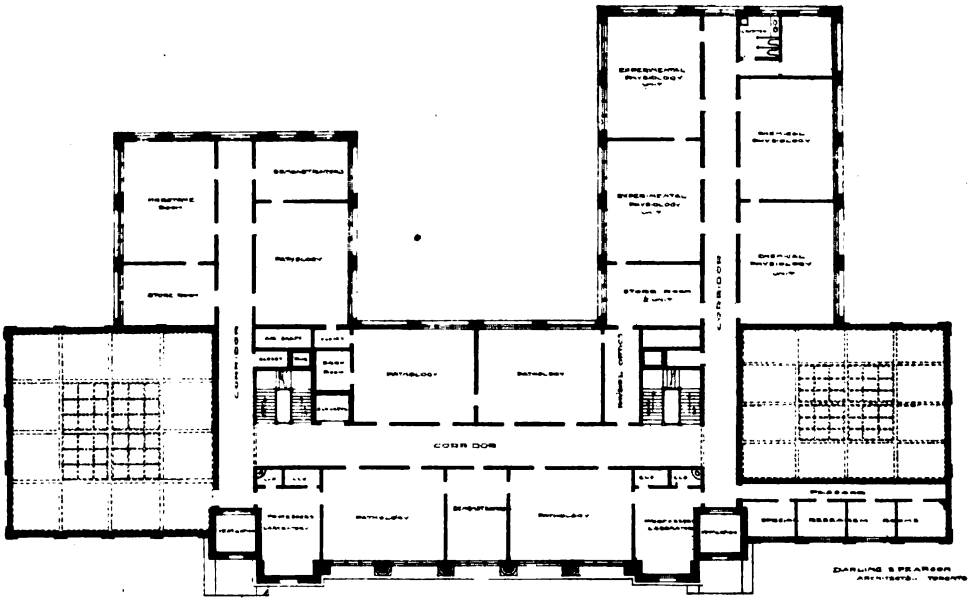
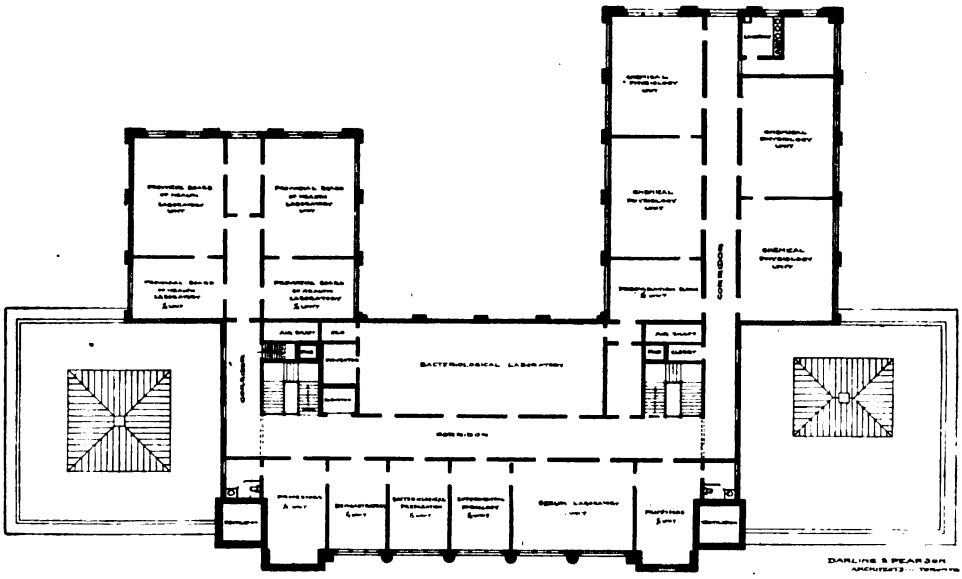


MEDICAL BUILDING TORONTO UNIVERSITY

FIRST FLOOR PLAN



MEDICAL BUILDING TORONTO UNIVERSITY

SECOND FLOOR PLAN

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The result was that the faculty unanimously recommended the adoption of the unit system for the proposed laboratories. The university trustees accepted the recommendation, and construction, begun in August last year, has progressed so rapidly that the buildings are finished and the equipment is now completed. The whole is, therefore, at the moment in such a stage as to permit one to say to what extent the object sought has been attained.

Architecturally, so far as the exterior is concerned, the utmost has been done, considering the difficulties that the enormous window space interposed. The appearance of the buildings, however, is, on the whole, very acceptable.

The interior, on the other hand, is very satisfactory. The accommodation it furnishes, as well as the conveniences of arrangement it offers, is sufficient to demonstrate the great advantages of the unit system over the common, more or less haphazard, system of laboratory construction everywhere illustrated.

The buildings are to house physiology, physiological chemistry, pathology and public health. The wing to the right, as shown in the accompanying diagrams, accommodates physiology and physiological chemistry and contains, in addition to the lecture theaters, twelve units and eight half units. The other departments occupy the main portion and the left wing, which contains sixteen units and fourteen half units.

In the construction of these buildings according to the unit system special local conditions had to be considered, and, further, the possibility of their extension in a few years was a factor in determining the arrangement as a whole. This necessitated important modifications in the disposition of the units as suggested in Professor Minot's later paper.

What these modifications are may be gathered from examination of the copies of the plans of the various floors of the buildings. The latter are in the form of the figure |_ _|, the lecture theaters forming wing-like extensions at the angles of the figure. This latter arrangement was adopted in order to permit the lecture rooms to be lighted from their roofs, and at the same time to avoid interfering with the lights for the units. An additional advantage resulted from the arrangement is that the corridors, which are centrally placed, permit ready access to the lecture theaters and units from the entrances and from the students' quarters.

The units are, for the most part, grouped in pairs on each side of the corridors on the various floors. The walls of the corridors are of brick, but those which separate the units from each other are of wood and plaster only, and they can consequently be removed in a few hours without leaving traces of

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their disturbance other than those on the line of the fresh plaster added. Each unit communicates directly with its neighbor by a door, and, further, has two doors opening into the corridors. It is thus possible at any time to form two rooms out of a unit, each of which will communicate directly with the corridor.

The window space devoted to each unit is ample. It is, in fact, so large absolutely as the supporting capacity of the outer wall will safely permit. The window area is 242 square feet, while the outer wall of each unit measures 420 square feet. The window area is, therefore, nearly three-fifths that of the outer wall. The terminal units of the wings have additional window space in their second outer wall, and, of course, in these the lighting is brilliant. In all the other units, however, the lighting is, as already said, ample.

The corridors are lighted from the hall doors, from the large windows at the ends of the wings and from the wells over the stairway. An examination of the building itself shows that this provides sufficient illumination with diffuse daylight, and even on very dull days it is enough for all, except, perhaps, the main corridor extending between the two lecture theaters on the ground floor, and then resort may be had to electric lighting.

The two stairways are lighted from the roof, and are so placed as to permit the student reaching any floor directly from the basement, where the reading and writing rooms are situated. The locker rooms and lavatories, on the other hand, are in the subbasement and can only be reached from the basement corridor.

The wings are, including the basement and subbasement, five stories in height. The main portion is only three stories, if we leave out of account the boiler room. This arrangement is due to the fact that the rear part of the building is placed in a shallow ravine. White brick, with stone facings here and there, is the material; the roof is flat and bordered all round with a brick parapet.

The building is heated by air forced over heated coils by large fans driven by steam, and the ventilation is thus, in part, provided for, and also by the exhaust currents in the ventilation turrets which rise over the entrances.

A feature of special interest is presented by the small research rooms. The half units are intended to be used for various purposes, but chiefly for small groups of students pursuing advanced work or for special lines of research, but each of the fifteen small rooms, shown in the plans as adjacent to the lecture theaters, is reserved for individual workers carrying on selected investigations. These, with the other arrangements described, have been designed with the view of making the buildings a home for research.

From Dr. Macallum's article in *Science*, May 22nd, 1902.

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John Hoskin, Esq., K.C., LL.D., the Chairman of the Board of Trustees of the University, addressed the audience which had assembled in the north lecture theatre on the occasion of the formal opening. He spoke of the building and equipment, emphasizing in a very pronounced way the great progress which had been made in medical research. He remarked that the work of construction had been completed in the short space of fourteen mouths from the time that the decision to build was arrived at. He also referred to the happy circumstance that the increased and efficient accommodation was provided at the very moment when two Medical Schools, namely Trinity and Toronto, had amalgamated, and when these increased facilities were so urgently required. Dr. Hoskin considered that we had to thank the Government of Ontario for the financial aid which they have provided, not only in connection with these new buildings, but also for the convocation hall which is in prospect. He then formally handed over the keys of the new buildings to the President of the University on behalf of the Board of Trustees, and in doing so he paid a tribute to the untiring energy of the Dean of the Medical Faculty, Dr. Reeve, to whose persistent efforts the completion of these new buildings is largely due.

President Loudon accepted the care of the building from the hand of the Chairman of the Board of Trustees and assured him that the Medical Faculty would use the buildings for the advancement of medical science in a manner that will enhance the reputation of the University and redound to the benefit of the public. He acknowledged with gratitude the prompt action of the Trustees, the Government and the Legislature. He would not forget the handsome way in which they had made provision for the Medical Faculty and for the department of Physiology. He then proceeded to recall for the benefit of his audience some facts regarding the progress of medical education in Ontario, and spoke as follows:—

"From the year 1788 onwards machinery has existed for the licensing of practitioners. At that time little or no teaching was available. Regular medical courses were begun in 1844, when on the 15th of January the inaugural lecture of the Medical Faculty of King's College, the then Provincial University, was delivered. The Faculty had been established after much controversy and negotiations, and it is to be noted that the Faculty of Medicine was then on a par with those of arts and law in the University, and was equally with them a charge on the endowment, drawing eventually between eight and nine thousand dollars annually from this source.

Within ten years after the establishment of medical instruction on an apparently permanent basis the University actually

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in 1853 abolished the Medical Faculty of the University of Toronto.

From 1853 to 1887 we had the era of Proprietary Medical Schools.

The alleged ground for the abolition of the Medical Faculty was the supposed popular sentiment against State aid for a lucrative profession Whether this was the real ground is still a matter of dispute. If it was the real ground the Legislature of succeeding years manifested great inconsistency in the application of the principle. for from 1852 to 1871 no less a sum than $65,000 was granted by Parliament to the various Medical Schools, aid being given in fact to all who applied. After 1871 all these grants were cut off, just as had been the grants to Art Colleges a few years before.

Looking back over the past hardly anybody will venture now to assert that the era of Proprietary Schools was an unqualified success. Nobody will say that they provided an ideal medical education. But on the other hand, nobody will deny that much good and honest work was done, and that the education of our medical men in spite of difficulties reached a high standing.

Efforts were made by the University of Toronto to raise the standard of examination from time to time. That standard was raised, in 1882, for instance, and the numbers of the graduating class in medicine dropped at once from thirty-two to fifteen, and eventually to ten. The schools were, in fact, unable to cope with the situation. Their teaching was weak on the scientific side, and it was bound to be so. It was impossible for them to provide the expensive equipment and elaborate supervision necessary under modern conditions for thorough work on the scientific side.

Through the establishment of a teaching faculty of medicine, in 1887, medical education in Ontario entered upon a new era. Under the new organization, the expensive equipment of the University in biology, physiology, chemistry and physics was put at the service of the Medical Faculty, and moreover the Medical Faculty has been self-sustaining, and has been, in fact, an element of strength to the resources of the University.

The Medical Faculty has done a great work in the interests of the public by sending forth a great body of young men to alleviate the ills of humanity.

We are now entering upon an important forward movement in the work. The Federation of Trinity with the University of Toronto is practically assured, and on the strength of this the amalgamated Medical Faculties begin to-day its work in this Building.

Medical education through this step enters upon a new and higher stage of development, and the future is full of hope.

There is just one point further to which I wish to refer very

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briefly—the question of State aid to the teaching of medicine. Old prejudices die hard. The old doctrine of prejudice of no aid to the students of a lucrative profession has been reiterated so often since the middle of the last century in Ontario, that it may seem almost like heresy to dispute it. But is the profession after all so very lucrative? There are some prizes, it is true; but is the average of wealth in the profession above that of a comfortable living?

To see the matter in its proper light we should take into account the enormous importance of public health, even from a financial standpoint. Large sums of public money—I am looking around for the Principal of the Ontario College of Agriculture—are spent annually upon the teaching of agriculture, engineering and pedagogy in view of their general importance, but not one cent for any branch of medical science.

It is my view that this doctrine of non-support should be revised. I do not advocate indiscriminate grants, but the subjects to which the whole time of a professor is given, such as pathology, might be given aid.

Is the physical condition of the student of less importance than his mental development?

The material prosperity of the country is advanced by the engineering profession, which profession is at least as lucrative as that of medicine; and after all of what advantage is material prosperity without the health to enjoy it. It is said that Rockefeller would give millions to be able to digest beefsteak.

The pathology and hygiene of domestic animals are taught in the Agriculture Colleges, and does it not seem strange that the claims in the same branches in connection with human beings should be ignored? I merely put forward the idea as one which I hope to see realized when public opinion becomes a little more enlightened, and some unreasonable prejudices are eradicated. I shall not detain you longer, but give way at once to the different gentlemen who have yet to address you.

We have recently had the pleasure of welcoming to Canada many of the representatives of commerce and legislation from the Motherland, but I may say that it affords us particular pleasure to-day to have with us upon this occasion so distinguished a representative of British Science as Professor Sherrington of the University of Liverpool. His work in physiology has won a high place in the world of science. We owe Professor Sherrington our very special thanks for responding to the invitation of the University to be present, and for his readiness to undertake a long and tiresome journey to be with us on this occasion, and I take this opportunity of expressing the indebtedness of the University to him for his great kindness.

The President then called upon Professor Sherrington to deliver the inaugural address

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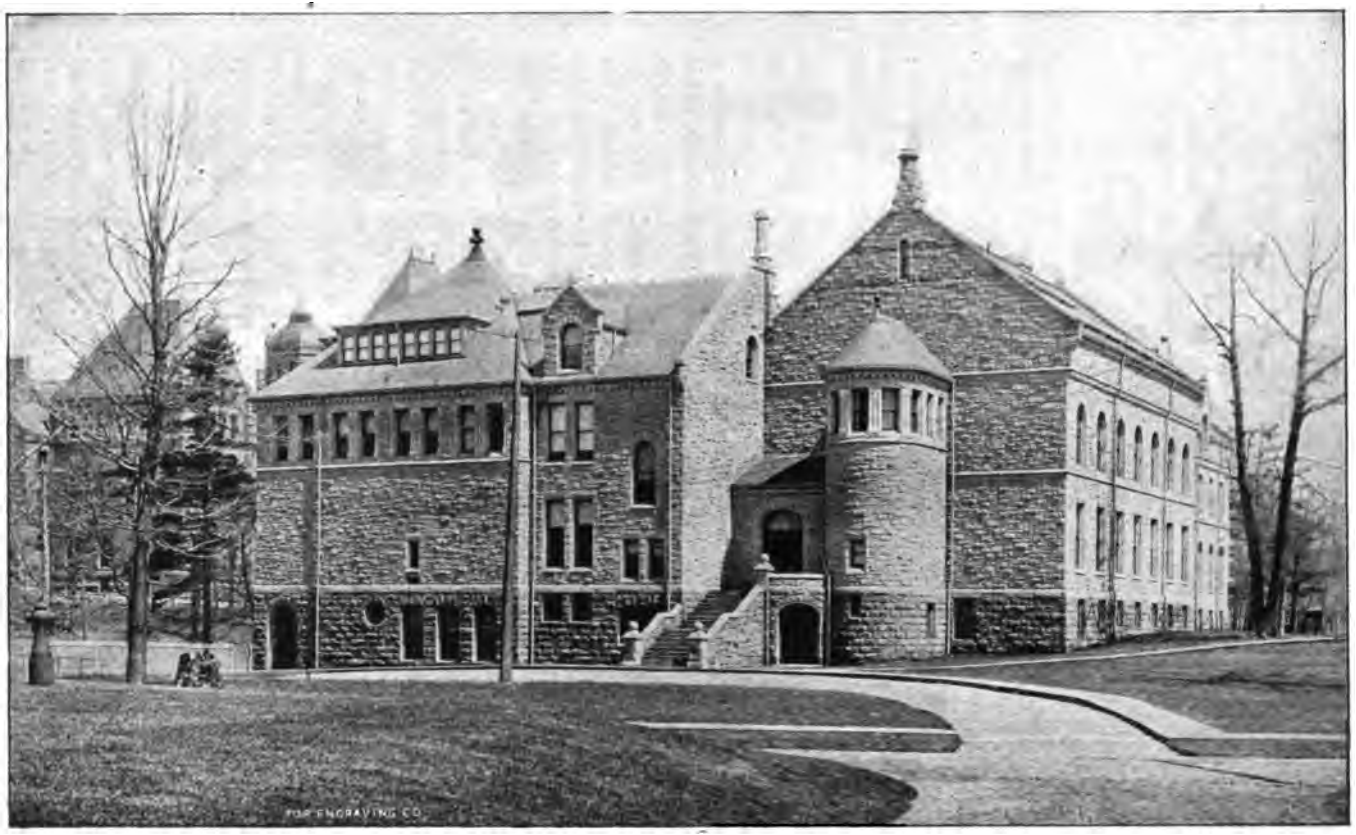

**BIOLOGICAL BUILDINGS—WEST WING**
**Containing the Museum and Anatomical Department.**

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**ADDRESS BY PROF. CHARLES S. SHERRINGTON, M.A., M.D., LL.D., F.R.S.**

Holt Professor of Physiology, University of Liverpool, England.

Believe me it is a difficult thing for a stranger, even at your invitation, to address you on an occasion like the present. So many significant events crowd in upon him and time for reflection is needed to weld into a connected whole the impression he would wish to offer to you. Not that the growth and doings of this University have not been followed and watched with interest by us in the Old Country. On the contrary, your activity has been felt, not only as a matter of mutual congratulation, but as a spur to arouse us to effort in our own similar pursuit of educational aims. But the stranger coming among you necessarily feels the shortcomings of his acquaintance with the details of these academic enterprises you have taken in hand. One advantage, however, is his. His view, gained from a distance, necessarily has freedom and truth of perspective that may give it a value in your eyes.

Some things lose by perspective. Some things, large, when at close to hand, dwindle when viewed from afar. Not so Canada. The perspective given by the width of the Atlantic is but an appropriate setting across which to view her greatness and her far-reaching activity. And this event, this academic celebration, this *dies festus*, in your University to-day, retains from afar off all the significance of a great event. It loses no tittle of its dignity and import when viewed across ocean from the crowded turrets of the older Cambridge, or the hoary spires of Oxford. It shines, I assure you, like a beacon to the new University whose buildings are as yet unfinished on the hill above the port of Liverpool.

Coming from a region where history is long and the land little to this where written history is short and the expanse of land incomparably great, one realizes how relative is size. And in regard to the event of to-day the largeness of this country rises in my thought, not as a matter of mileage, but—that with you, more than with us in the Old Country, the size of to-morrow is vaster than the size of to-day. Each step of progress here, more than with us, has to be measured by its ample consequences in a more rapidly widening horizon of the morrow. These new laboratories have a field already demanding them, and a still larger lies before them in an immediate and historic future.

Biology is the study of life in regard especially to growth and organization Every medical man is a biologist, and as a biologist it may be but natural if I regard to-day's event from a biological standpoint, and the community as an organism, and the university as a living organ, essential to the healthy life of the community.

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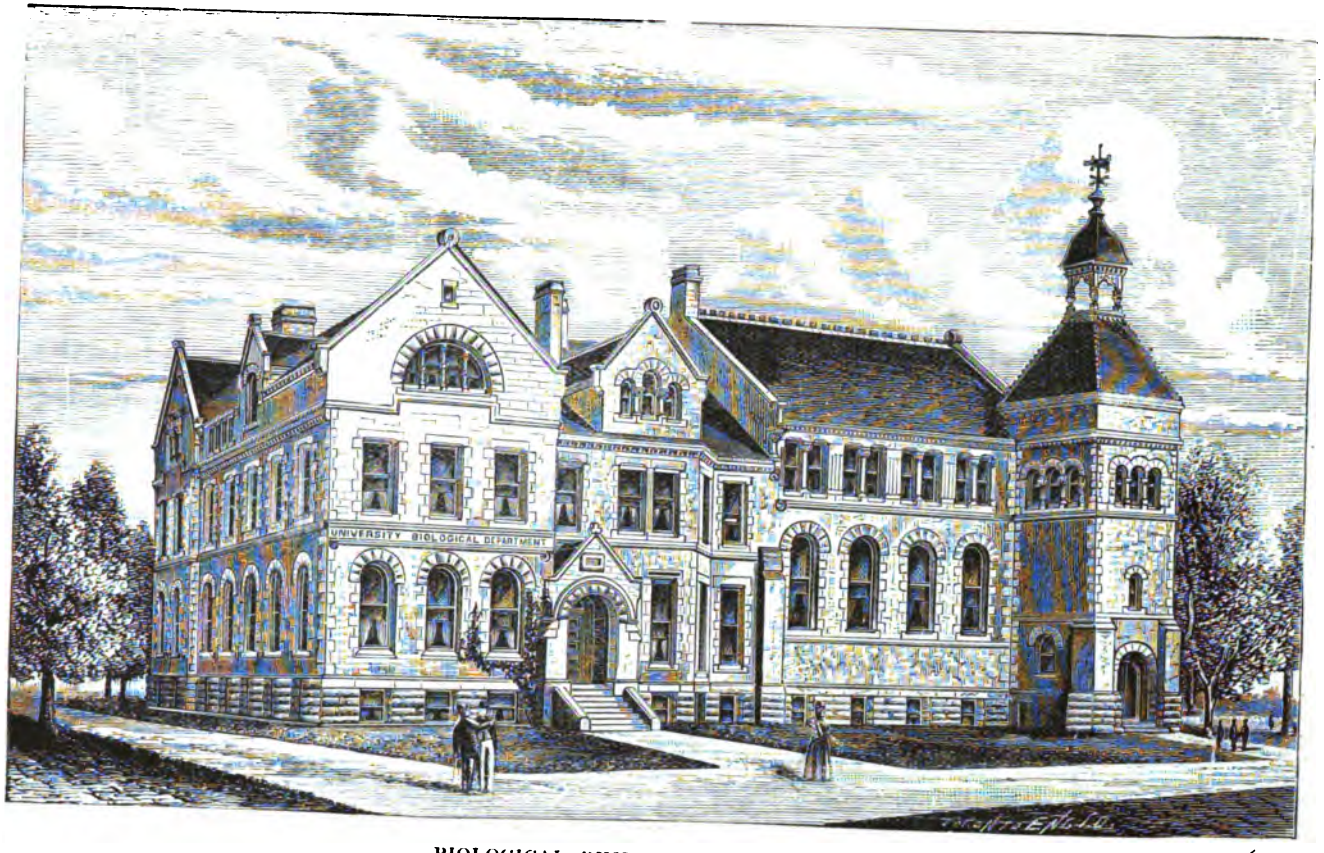


BIOLOGICAL BUILDINGS—EAST WING.

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## Medical Science.

Science—especially medical science—is growing in importance to the community. We must have organization in science as in industry. This University to-day makes provisions of first rate importance for the organization of medical and allied sciences in the region which centres here. Capacity to rear and support men constitutes the extent of a country, and population is the biological measure of the social organism. The ceaseless energy of the race has begun to plant a great population in this land. Growth, great and rapid, is inevitably before it. The growth of nations as of individuals requires the vigilance of guiding hands. Growth, for it to take its course, rightly towards perfection, requires that provision for the security and expansion of the liberal arts and sciences forerun rather than halt behind the actual requirement of the hour. Not only for their direct utilitarian service. They form a whetstone for man's most universal tool, his intellect; also a discipline for character, in the pursuit of truth for its own sake. Scientific truth, when found, has often proved unpalatable to man,—as when it dethroned him from his fancied seat at the centre of the whole perceptible universe, a universe he had imagined simply subservient to his needs—or again, as when it taught him that instead of being a creature altogether apart from the brutes, there are flesh and blood bonds between himself and them. Regardless of its cost to his cherished fancies, man strives for scientific truth. And, as the old Greeks said, this purpose puts him farther from the brutes and nearer to the gods.

In nurturing science I would urge that a community cultivates more than mere utility. And even with regard to mere utility as the fields of knowledge fall ripe under the ceaseless husbandry of the world's thought, those who would join in the great reaping, and not only glean where others reaped before them, must cultivate for themselves. To do this requires more than the devotion of individuals. It requires the intelligent co-operation of whole groups of individuals. Organized scientific inquiry becomes in advanced countries a conscious aim of the community as a community.

## The Various Workers.

That society may draw due benefit from wells of natural knowledge three kinds of workers have to stand side by side. First, the investigator, who, pursuing truth, extends discovery, with little or no reference to practical ends. He constitutes the fountain head of the knowledge that is for distribution. Other hands may reap the harvest, but his sets and rears the seed.

After the investigator comes the teacher. To him it belongs

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to diffuse the knowledge won. This honorable and difficult task receives its best reward in seeing the small spiritual beginnings of a pupil widen out into the spiritual beginnings of a master. Thirdly, there is the applier of natural knowledge. His part consists in making scientific knowledge directly serve practical needs. It is this work which to the popular idea often represents the whole of science, or all of it that is commonly termed "useful." The practical results of this work are often astounding to those ignorant of the steps by which they have been reached. The greatest of the steps, however, is usually the first one, made in the laboratory of the investigator. These three co-workers are co-equal in the priesthood Science and the application of science are one growth, united together even as the fruit and the tree. The proper hearth stone round which the community should group these laborers, laboring for a common end, is the University. There the sacred flame of learning is fed from many sides by many hands.

## VALUE OF SCIENCE.

It is sometimes said that pursuit of science renders a man deaf to the appeals of practical life. That it tends to withdraw him from the everyday interests of the people. That I do not believe of any science. Certainly not of biology and the medical sciences. From their very outset these subjects draw the mind toward study of an organization the most complex and the most perfect it can examine. The ancient *simile* that our old school classic, Livy, drew between the human body and the body politic, the state, has not lost, but won significance as the centuries have run. The achievement of the microscope has been the discovery that living things, whether plant or animal —all living things of more than minutest size—are commonwealths of individually living units. These cells, as they are called, are living stones that build the house of life. In that house each stone is a self-centred, individually living microcosm, individually born, breathing for itself, feeding itself, consuming its own substance in its living, and capable of and destined for an individual death. Each cell lives by exchanging material with the world surrounding it. In other words, its bulk depends on its surface. Hence surface increasing as the square, and volume, as the cube, cell-size, is circumscribed by tiny limits—microscopic limits. Had the dependence been greater than it is, and the average size of the cell less, and too small for resolution and discovery by the microscopes of seventy years ago, it is hard to imagine where biology would stand to-day. For two generations every biologist has been accustomed to think in terms of the cell theory. Every shred of the body he

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knows as an intricate interlacement, embodying co-operation and mutual support of associate thousands of individually existent cells. Division of labor has gone on, and with it differentiation of function; while this group of cells combines with its own inner life some special function subservient to the needs of the great commonwealth, as a whole. Another group is specialized for another duty again subservient to the general needs. Each organism, however complex, each one of ourselves here, is built up of living myriads of cells. Each such organism consisted at outset but of a single cell, and from that in his life's growth have arisen the countless myriads composing him to-day. The blood relationship is close between all the cells of each one individual body. The cells of our nerves, or our muscles of our time-hardened bones are all blood relations through one common ancestor. Yet so far has specialization of these unit lives gone on, yet so far does function reflect itself in microscopic form, that there is greater likeness between my nerve cells, the nerve cells of a fish than between my nerve cells and my own muscle cells—despite the blood relationship between these latter. And in the commonwealth of cells that constitutes each one of us, goes forward day long, night long, as in the body politic, the birth of new units to replace the ones outworn, the subordination of many individual purposes to one, the sacrifice and destruction of the individual life for the benefit of the many.

Trained in the study of such an organism, surely the biologist and the medical man will be the last to underrate the importance of organization to the community for the common weal. Therefore I am rejoiced, but I am not surprised that it is your faculty of medicine which to-day, in its public spiritedness, erects and installs these fine laboratories, this potent addition to the organization of your community, for its activities in medicine and biological science. I would also, as a friend among you, offer you my congratulations on the consolidation of your two schools of medicine. Union means not only greater strength, but the more effective application of strength.

I need not to this assembly extol medicine. Many of her votaries are here; I venture to count myself as one. But to-day the relation toward her of education is a matter on which our minds are naturally set. Am I wrong if in regard to this it rises silently to me that from the educational standpoint medicine, like Janus of old, in a good sense, bears a double face? On the one hand, she is an empiric. She has learned to cure by what the comparative psychologist calls "the method of trial and error." Her conquests over sickness were acquired purely as result of experience, without help either from a priori or from inductive reasoning. And great and glorious is the role of her achieve-

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ment on these lines. Of her humanitarian triumphs probably still—certainly until a generation ago—the greater share is assignable to this part. The use of quinine in malaria, the curative effects of the iodides and various metals, the discovery of chloroform and ether as anesthetics, these and the names of a long line of famous physicians from the renaissance down to some as justly famous as those of the past, and with us now to-day, suffice to certify the inestimable gifts that medicine as an empiric has given to mankind in his suffering. This face of medicine well may wear a garland.

## Medicine a Science.

In her other aspect, medicine is not an empiric, but a scientist. Who will refute me if I assert that medicine is as well an art as a science. Somewhere it is said that woman is the last thing man will ever civilize. So the scientific aspect, the male face of two visaged medicine, thinks of that female face, the empiric, with whom his lot is linked. He feels sometimes that his other half is the last thing science will ever render wholly rational. By dint of patient toil he improves her practice by showing her a reason now and then. No sooner is that done than she is off on a fresh flight into the inexplicable, and he must cudgel his brains anew to find her a fresh logical position.

The feminine, ever youthful trait in medicine, has to the student an undying charm. But on the whole the countenance of medicine has of recent years, for the student, become masculinely severe. This head of medicine has indeed become the larger. Hydrocephalic in appearance though it may be, it is filled, not with water, but with reasoned facts. The development proceeds in the main from certain data acquired in the century just passed. For instance, the chemist in discovering that all the million-sided chemical diversity of the perceptible universe is composed from a few—some 70 substances,—therefore called elemental, discovered also that living matter, instead of containing elements different from and subtler than those of the dead world, consists of just a few of those very same ones. Further, the doctrine of the indestructibility of matter was demonstrated in a new form, namely, as the indestructibility of energy, and the convertibility of any one form of energy into other forms. Thus dead and living matter become united as subject material for study. It became really possible to consider the living body as a chemical and physical machine, a machine to which the laws of chemistry and physics can be applied.

But this scientific progress in medicine, fruitful of benefit to the community, lays on the community a burden of obligation.



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The empirical part of medicine is at once the most easy and the most difficult thing to teach. The preparation for learning it requires but little training in other subjects. Its facts lean on nothing but themselves.

## Historical Sketch.

With the scientific part of medicine it is different. That is based upon initiatory studies. Medicine, historically traced, we find first drawing help from the simplest and nearest at hand of these adjuvant studies. First she bent to the study of the gross form of the parts and organs of the body. The gross form of these is significant chiefly where they are machinery for application of mechanical powers. The greater part of the corporeal machinery is, however, not destined for such work, but has its purposes in processes chemical, thermal and electrical, to which—marvellous appendage—mentality is adjunct. Medicine in the course of the seventeenth and eighteenth centuries sucked dry for the most part what the study of the gross form of the body's parts could yield her. She then turned to study of microscopic form—examined what Bichat first named the tissues, the fabric of the body. In so doing she came upon a great generalization, the cell-doctrine, discovering an essential and visible similarity of microscopic structure in all that has life, differentiating it from all which has not life.

But even before the advent of the cell theory, medicine had begun to ask of chemistry what it could give her. With the discovery of oxygen and of the nature of combustion the links between biology and chemistry began to be tightly drawn. The young Oxford physician, Mayon, had performed the fundamental experiments on respiration and had discovered oxygen more than a century before Priestly and Lavoisier, but the time was not ripe until the stupendous work of Lavoisier had founded modern chemistry. The cell-theory was from the first not only morphological, but physiological. It meant for the application of chemistry to biology that the chemistry of the body or of one of its organs was a chemistry resultant from a thousand tiny living furnaces, individual seats of oxidation, deoxidation, polymerization, hydrolysis, and what not.

Not only that, but the living laboratory of the cell itself manufactures even the medium which the cells themselves exist: the saps and juices of the body. And we are beginning to know, thanks to pathology, that every species of animal produces an internal medium specific to itself. Further, your distinguished physiologist here, Professor Macallum, who has so revealed the distribution of the chemical elements within the cell, tells us that the internal medium which the cells of even the highest animal forms produce as appropriate for themselves,

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still approximates in its salts to the water of the ancient geological seas in which their ancestry arose, and still reveal in fact the composition of that ancient ocean. In that respect these living cells, with all their influx of change, have been more durable and constant even than ocean itself. The contrast brings home to us a deep distinction between dead matter and living—the latter a moving equilibrium, gaining stability from the very motion of itself.

The bond between Schwann and Pasteur has opened a new perspective, and chemistry and medicine were drawn still tighter by their discoveries concerning those subtle influences named "ferments." Pathology, the study of these processes of the body in disease, even more than physiology, as yet has drawn help from this part of modern chemistry. If the processes of health are in fact the resultant of the due co-operation of ten million little foci of healthy chemical action in the body, the processes of disease are similarly divisible, and have to be traced to the unhealthiness of certain of these minute centres of activity. How extreme is the importance of chemistry to modern medicine, no single statement can perhaps emphasize so well as this—that is I believe, acknowledged on all hands—that in virtue of his chemistry, a chemist, Louis Pasteur, during the latter half of last century, was able to do more to alleviate the diseases of mankind and animals than any single physician of his time.

### Appeals to Physicist.

Also medicine has made appeal to the physicist, and from him she has got understanding of the body's heat, the basis of the knowledge of fever; she has learned the intricacies of the mechanism of the eye and refined methods of examining that organ and of remedying many of its defects; the laws that govern the circulation of the blood and the subtlest means of detecting the forces liberated in the working of the nervous system. In some cases, as sciences grow, their discoveries seem to sunder them the further one from another. In my belief, that merely shows they are at the outset of their career. To-day we find physics and chemistry converging and conjoining within a field of physical chemistry. It early became convenient to have a specific name for living material, wherever found. The name given was Protoplasm. It might have been better to call it $x$ or $y$, so far was it in many respects an unknown quantity. Instead of looking forward to this material as a chemical entity, we incline now to regard it rather as a field for chemical action, satisfying certain particular conditions. Probably discoveries regarding these conditions will fall to the physical chemist, perhaps in a future very near at hand.

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Probably such discoveries will be among the most valuable that medicine has yet received from any source.

I have said enough to remind us how interlocked with science medicine has become. She is applying sciences to her own problems, and they form a vast capital fund from which she can draw wealth. To give instruction in this part of medicine, to turn out men trained in it, is now one of the duties of a medical school. The earnest student has a right to expect such training from his *alma mater*. But for it the requirements are importantly different from those that suffice as an introduction to empiric medicine. In the first place, as Pasteur said, we cannot have the fruit without the tree. For scientific medicine the student must, perforce, be thoroughly trained in his sciences before he can really grasp instruction or truly profit from his medical teaching. One of the aims of his instruction in empirical medicine is to teach him to observe for himself, so in his instruction in scientific medicine, one of its aims is to enable him to apply science for himself. How small a fraction of all the realities of medical practice can be met in the few years of preparation of the student in the clinic at he passes through it in his school career. His teacher knows that well, and uses the cases there as types whereby the principles of medicine can be fixed as a beginning. The rest must be accomplished by the man himself, as his life's work. The more necessary that the man go forth from his school equipped not only with the present applications of science to disease, but so possessed of root principles of the sciences adjunct to medicine that he may grasp and intelligently use the further developments of scientific medicine after he is weaned from his instructors and the school. That is a way to obtain enlightened progress in professional practice. What truer safeguard can a man have alone it may be, and isolated from the centres of knowledge, what truer safeguard can he have against all the psuedo-scientific quackeries of the day, than some real knowledge of the principles of the sciences, along whose lines the discovery of medicine must develop?

## Burden on Teachers.

Therefore it is that the burden of obligation falls heavy nowadays upon the teaching resources of every faculty of medicine worthy of the name. There is, in the first place, the burden of increased intellectual labor. For the learner and the teacher is this true. To seize the proffered assistance of these great and complex sciences is not always easy. These studies are more difficult than those that were needed once, and they take longer to acquire. The mere instrumentarium of modern chemistry and physics, as applied to medicine, and of physiology and

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pathology, and bacteriology and of hygiene, of itself suffices to bring conviction of the increased difficulty and longer training due for these studies now preparatory to medicine.

Further, these initiatory studies have become vastly more costly than was all that formerly was required. Experts have to be found who can devote themselves heart and soul and undividedly to their particular subject. Laboratories have to be erected and equipped, and on a scale that makes them a distinct feature of the modern world. Those that we see now here are models of their kind; wise foresight has planned them; public-spirited enterprise has constructed them. Nor does the achievement end with their erection. The laboratories and their equipment are but the factory and the plant; both fail in their purpose if they halt for sustenance. And beyond that the likeness does not go. The factory, once started, if it be wanted, can expect to pay, to support itself. Not so the laboratory. The laboratory is both a school of instruction and a school of thought. Well, then, no higher instruction can be expected unaided to pay the expenses it involves; it can only do so at the expense of those who come to learn, and that is to put its teaching beyond the reach of all but the wealthier few. And the instruction is costly, for it has to be practical. And another source of expense is that the laboratory has not only to distribute knowledge, but to manufacture it. The duties of a University do not begin and end with the disciplinary and didactic Besides schools of instruction, they must be schools of thought To be this latter, the laboratory must pursue research. Even for the welfare of the class-teaching this is essential. Instructive lectures may be given by men of ability, the whole of whose knowledge is second-hand, but it is doubtful whether the real life of science can be fully felt and communicated by one who has not himself learnt by direct inquiry from nature. Nothing so augments the teacher's power of impressive and incisive teaching of a subject than to have faced problems in it himself as an original enquirer. And, after rudiments have been once fairly acquired, there is for good students no training equal to that given by following even a small research under an experienced leader.

### School of Thought.

So, truly, does the laboratory become a school of thought. Your laboratories are arranged with admirable provision for research. The student should enter on his study of a natural science through the portal of its fundamental experiments. The attitude his mind thus takes is the true one—the only true one—for further insight into the subject. Too often humanistic studies at school have tended to kill the natural philosopher

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within him—that innate curiosity for facts, the healthy heritage of childhood. He leaves school a little book-man. Even as to the phenomena of nature, he has been insensibly led to ask for statements upon authority, rather than to turn his own senses and observation to the phenomena themselves. To learn a science or acquire an art resting upon sciences, the first thing to do is to look at the fundamental facts for yourself. Our great teachers of medicine teach upon this plan. They teach where they learned, not in the library, but from the bedside of the sick. In laboratories such as those raised here for pathology and physiology and hygiene students can learn these sciences as medicine is learned in the hospital ward, by direct inquiry into nature. The teachers you have given them are men who have won widely-recognized distinction as themselves direct enquirers into nature. Worthy students will appreciate the double boon their *alma mater* gives them—the means of learning at first-hand those secrets of nature which lie at the root of his craft's skill—and to learn them under guidance by men who excel in unravelling such secrets.

## English Action.

Only by enabling men to continue their learning after their teaching is over can we secure the greatest advantage any educational system can afford. Your laboratories here will encourage post-graduate work. We look with keen interest to the researches that will flow from them. No subjects offer finer fields for research than do the progressive studies, physiology, pathology and hygiene, to which your new University buildings are consecrated. And of the functions of a laboratory, research is not the least costly. We in the Old Country find that. Our central Government has done little to support research. Our nation, proud of its success in things practical, has been prone to despise the abstract and the theoretical. We do so foolishly; we do so at our peril. Behind all practical application there is a region of intellectual action to which, though our practical men have contributed little, they owe the whole of their supplies. Theory, if a goose, is the goose of the fairy tale that lays the golden eggs; no more such eggs if once you let her die. To speak of theoretic knowledge slightingly is for the lips of the fool. The value of abstract research to a country is becoming more widely acknowledged than it was. Sir John Brunner said the other day, at Liverpool, that there was no better investment for a business man than the encouragement of scientific research, and that every penny of the wealth he possesses has come from the application of science to commerce and manufacture. And

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we find that the munificent citizens have and do come forward among us and meet by their individual gifts the pressing needs of our community at large.

## New Era Dawning.

But we welcome a new era dawning on us. Liverpool, Birmingham, Sheffield and other great centres, begin to regard the local University as an institution entitled to support from the public means, for instance, by subsidy from public rates. Such subsidies can be used also for studies which do not come within allotment from the smaller subsidy from the central Government: medicine, for instance. Proud of the young universities —to which yours of Toronto is a time honored veteran—communities and local Governments are encouraging research within our universities. They do not expect such research to be able to pay its own way, but they recognize that indirectly it does pay the community that gives it a home. They feel it a duty which they owe themselves. Is not the university a party of their own life, and is not research a part of the university's life-blood? They feel it a right due to their own higher selves. It stimulates progress. Supported by the large-handed sympathy of the community and the local Government, it means quicker advance, both material and mental, it means invention and it means medical discovery. And *qui facit per alnum facit per se*, is a motto worthy of a State.

## Uses of Laboratories.

What, then, are finally the uses of these laboratories now opened by your University? They will assist in training men for various honorable callings, especially for that most ancient one of medicine. They will assist, no doubt, also to render life by practical applications of science superficially still more different from what it was only a short generation ago. They will assist to bring home and distribute to your community treasures of knowledge from all parts of the globe. They will assist—and it is thought dear to a high-spirited people—themselves to add to the sum total the treasures of knowledge of the whole human race. *"Noblesse oblige"* appeals to chivalrous nations, as well as to chivalrous individuals.

But their highest office seems to me, perhaps, not even these high ones, but a more difficult still. Genius cannot by any community, however wealthy and powerful, be made to order. In biblical language, it is the gift of God. All a community can do toward obtaining it, be our riches and willingness a thousandfold what they are, is to ensure the rare and glorious plant a meed of freedom, light and warmth for blossoming upon

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our soil. Who can doubt that in this population here genius exists—not sown, it is true, broadcast, for nowhere is it thus—yet existent, scattered up and down? This it is for the community to foster, to discover.

By help of these finely built and finished laboratories this much in one direction can be done. The problem to which a wise country turns is the discovery less of things than of men. By these laboratories, adequately supported, your community can create opportunity for the exercise of powers which come from sources within itself, but are utterly beyond its power to produce at will. Their loftiest function is creation of this opportunity. For that aim the studies in them must be followed with no single narrow technical purpose, but must be wide of scope and full of access to every rank of students. So shall these laboratories prove a corner-stone for the upbuilding of a temple of knowledge, and a touch-stone for the best ore of intellect within the bounds of this great land.

The President then called upon Professor Welch, Professor of Pathology in Johns Hopkins University, to address the audience.

**PROFESSOR WELCH, JOHNS HOPKINS HOSPITAL, BALTIMORE.**

*Mr. President, Mr. Dean, Ladies and Gentlemen*:—After hearing the last excellent address you will not expect any lengthy remarks from any one of us, although I do not wish to forestall what my colleagues may have to say. I esteem it a very great privilege to bring to this university of this city, of this province, my congratulations upon the opening of these laboratories which certainly are destined to increase very greatly the usefulness of this University. I consider it also especially gratifying that as a representative of the Johns Hopkins University this privilege belongs to me. There are unusually close ties I think between the Johns Hopkins University and the University of Toronto. We owe very much to you. You have sent us some of the very strongest of our supports in the University. I hardly need mention the names of your fellow townsman, Dr. Osler, Professor Barker, Dr. Futcher Ferris and others who have come there admirably trained for our work.

This University has stood for high ideals in medical education. I was particularly interested, Mr. President, in hearing from you, as President of the University, your attitude with reference to the position of medical education in the University, and the necessity of its support by public benefication and state aid. It is very curious as you indicated as regards the conditions here, and they were just the same through the United States, that medical departments should have begun in

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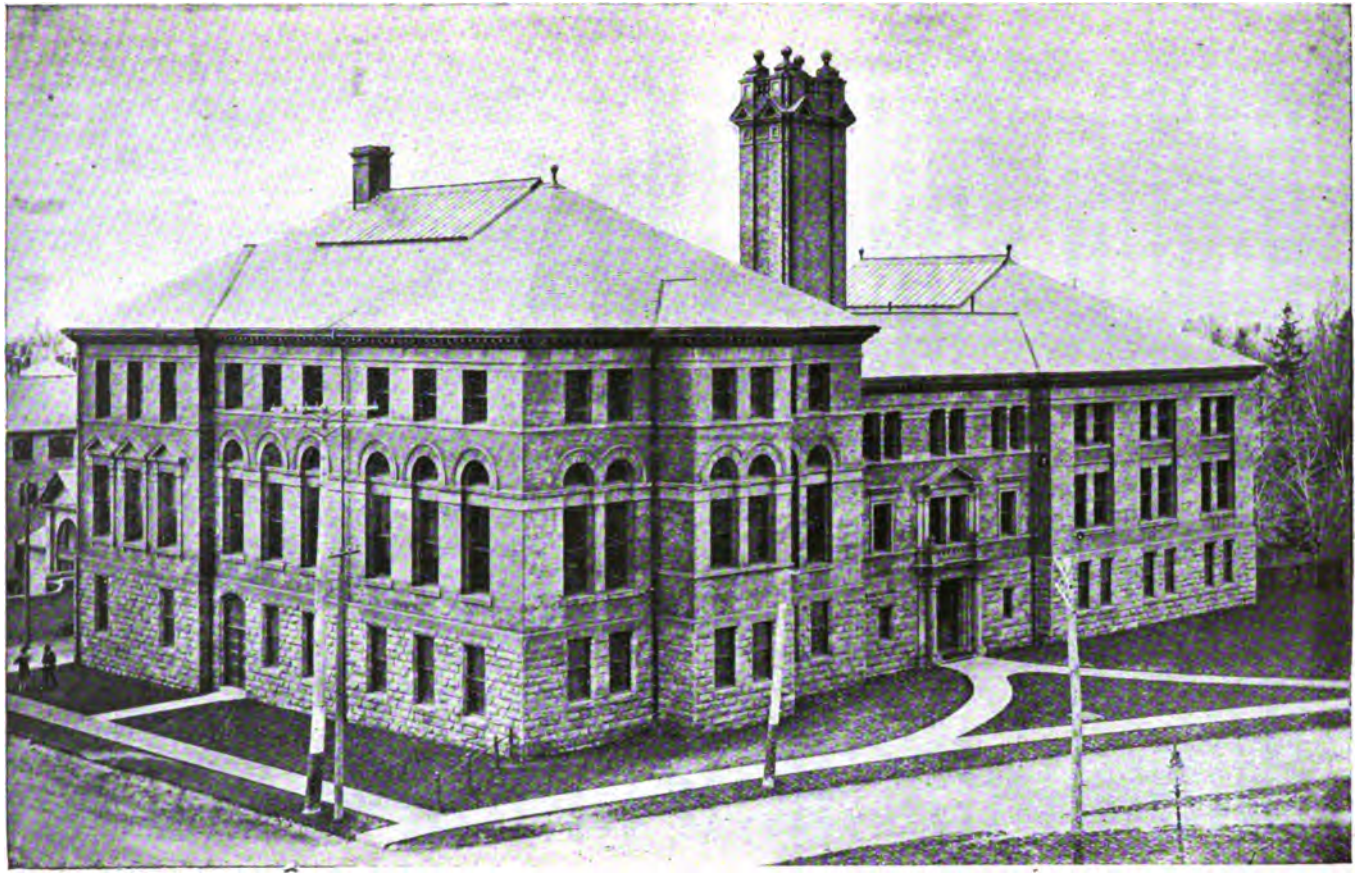

THE CHEMICAL LABORATORY.

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many instances as far back as the 18th century as integral parts of the University co-ordinate with other faculties of the University, and then for some reason or other—this is not the occasion to discuss that, although I think it is an interesting question—they lapsed into proprietary institutions and lost nearly all connection with the University. Perhaps that may have been due, in a large part, to the rapid development of the country and the necessity of supplying physicians to pioneer localities, although it is not clear why they should have been half-educated physicians.

Up to about the beginning of the eighth decade of this century, medical education was at a very low ebb on this continent. But since that time conditions have changed and the time has come when universities recognize medicine as a worthy object of support and fully worthy of University ideals. It is only going back to the very beginnings of the university, as those who are familiar with its history know, that medicine occupied at the beginning a very interesting position in the development of universities. I need only speak of the school at Salerno and how in the middle ages the medical departments of universities were often their greatest glory, and how that department was often the home of all there was of sciences in those days, and of physics and natural science.

Medicine fell away and became less worthy of affiliation with universities. But one of the most interesting features of modern times is the recognition on the part of the universities that medicine is worthy of their support.

There is no direction in which a university can do more for itself or more for the advancement of mankind than in the advancement of medical education. It is equally true, I think, that medicine needs the support of a university for its highest development. Fortunate, therefore, you are that you have this close union here.

And I also consider that it is almost a matter of equal congratulation that you have brought together the two schools of medicine, Trinity and Toronto. That must make a much stronger school than otherwise you could have. As Prof. Sherrington has indicated, the practice of medicine is only in part a science. To this day it is largely empirical, but it is recognized that it must become an applied science to a larger extent; and in order to become an applied science it must be based upon the fundamental sciences which are to be cultivated in these laboratories, and these sciences again as he has already indicated must rest upon chemistry, physics, and general biology. So that these laboratories are to be dedicated to the kind of work which shall have the greatest influence not only upon scientific medicine but also upon practical medicine.

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Very interesting also, Mr. President, were your remarks with reference to the influence which medicine has in these days upon public health and the interest which the public in general takes in medical things.

I do not know a more impressive illustration of that than what is taking place in the municipal campaign in the city of New York at this moment, where one of the chief arguments and main supports for the retention of the present administration there is the excellent work that is being done in the Health Department, the low death rate, the influence which the administration has had upon the death rate from contagious diseases.

I have, perhaps, said enough, but I wish also to say that I have the fullest confidence in the future of these laboratories. It is not the building but it is what is done within them and the men who work within, that really count; and I close with the hope and expectation that these laboratories will be the home of sound scholarship and be productive of important investigations in medicine and that they will attract students from far and near and that they and your university may prosper.

The President then asked Professor Townsend Porter to read a paper which had been prepared for the occasion by Professor Bowditch of the Department of Physiology in Harvard.

**PROFESSOR BOWDITCH, HARVARD UNIVERSITY.**

I desire in the first place to extend my heartiest congratulations to the University of Toronto on the acquirement of the enlarged educational facilities, which it has been our privilege to inspect, for these beautiful building will not only enable the University to play an important part in the advancement of medical education in America, but they afford a substantial guarantee that the part will be played with distinguished success by this enterprising and well-equipped institution of learning. The importance of this movement for the advancement of medical education in America cannot easily be exaggerated, for if the momentum of the past quarter century be sustained, it may easily result in shifting the centre of medical teaching and research to the Western Hemisphere, so that, though our grandfathers sought medical inspiration in London and Edinburgh, our fathers in Paris and we ourselves have studied in Berlin, Leipzig and Vienna, future generations of physicians may find their Mecca on the banks of the Hudson, the Schuylkill, the Patapsco, the St. Lawrence, the Charles or the Great Lakes.

Nor is it in medicine alone that we find evidence of abounding activity in the laboratories of the new world. Chemists

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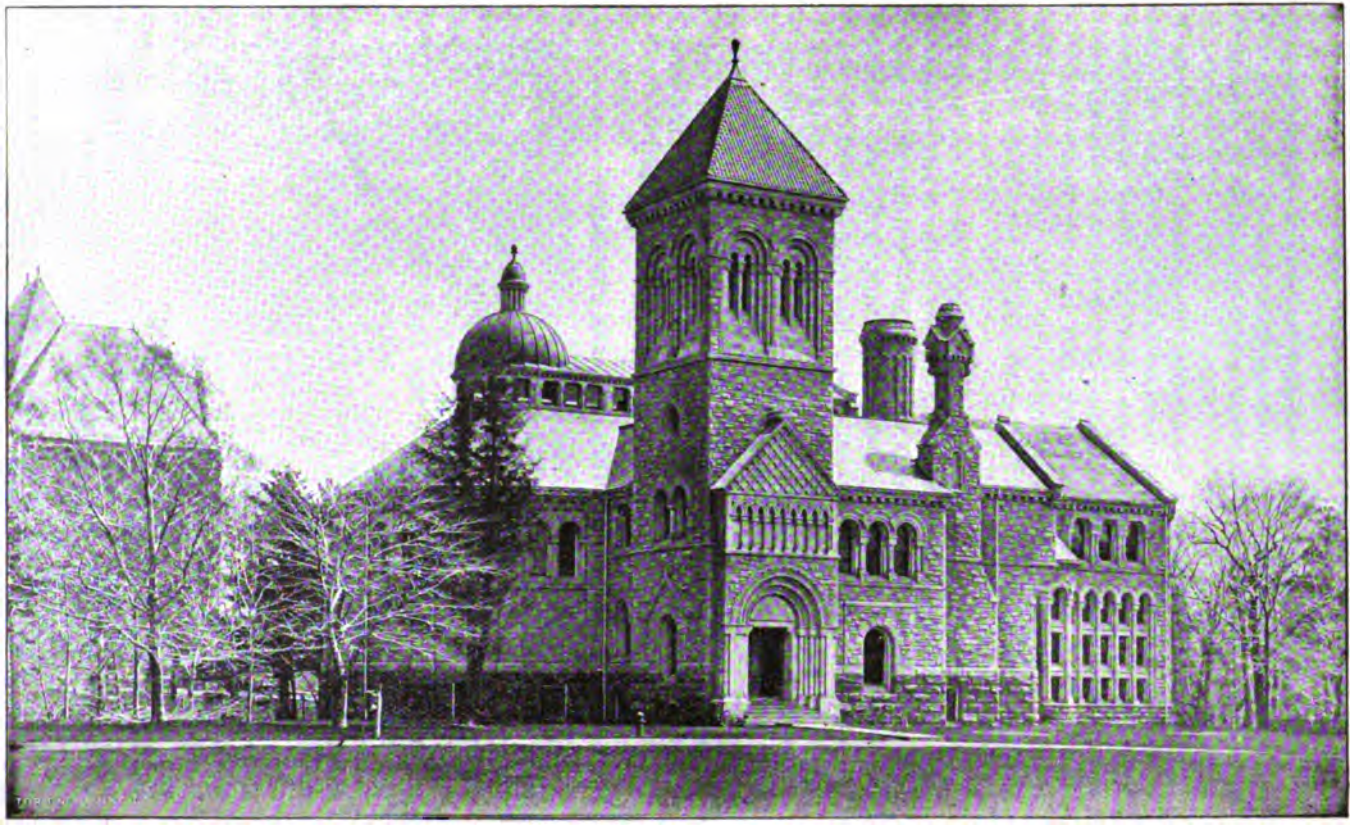

LIBRARY BUILDING, UNIVERSITY OF TORONTO.

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and physicists have not been idle, but this is a theme upon which lack of time forbids me to dilate, and it will suffice if I merely allude to the important work recently done in Montreal which has contributed so effectively to produce, in our conceptions of the nature of matter, the revolution which now seems imminent.

It will be found, I think, interesting to enquire whether the American movement in medical education is characterized by any special features which distinguish it from those which have taken place elsewhere. Now no one who has studied the work done in American medical schools during the last ten or fifteen years can fail to be impressed by the enormous expansion of the laboratory method of instruction, which has there taken place. Whereas thirty years ago anatomy and chemistry were the only departments of medicine in which laboratory methods were in use, we have now laboratories of physiology, pathology, pharmacology, hygiene, bacteriology and surgery, while anatomy has greately extended the scope of laboratory work by including the allied sciences of histology and embryology, and chemistry has become, to a large extent, the handmaiden of clinical medicine. Nor is it alone for purposes of advanced instruction and original research that laboratory methods have shown their value. Experience has proved that they may be extensively used by beginners in medicine in acquiring elementary knowledge of the various medical sciences. In fact there is practically no limit to the amount of laboratory work which first year students in medicine, with an academic training behind them, can perform under the guidance of competent instructors. A few years ago when my colleague, Dr. Porter, was arranging a laboratory course in nerve-muscle physiology, he announced his intention of supplying the first year students with capillary electrometers. I was inclined to doubt the wisdom of the plan for I knew the delicacy of the instrument and the care needed for its manipulation, but, nothing daunted, Dr. Porter proceeded to construct capillary electrometers by the hundred and placed them in the hands of the students. To my surprise the experiment was a complete success and the students acquired a practical knowledge of the electrical phenomena of nerves and muscles which they could have got in no other way.

We need not, therefore, hesitate to employ laboratory methods of instruction from any doubt about the ability of the students to profit by them, but there is a distinct limitation to their use imposed by the fact that they are much more costly, both in time and money, than any other means of teaching and that, if employed exclusively, it would be quite impossible to impart to the student even a small fraction of the medical information which every educated physician must possess. It

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is doubtless true that contact with the phenomena themselves and not with descriptions of them has a highly stimulating effect upon the mind of a student and that "the best knowledge is that which comes from personal experience" but we must not, on this account, condemn the lecture, the recitation and the text-book as worthless methods of instruction, nor deny all value to knowledge communicated from the experience of others.

It is, in fact, obvious that unless the student can profit by the experience of those who have gone before him, and begin where the latter have left off, no important advance in human knowledge will be possible. A wisely planned course of medical instruction will, therefore, recognize the lecture and the recitation as no less important than the laboratory, both for purposes of imparting information and as methods of mental discipline. We must remember that it is quite as easy to abuse the laboratory as the didactic method of instruction. Indeed, this seems to be a danger which now threatens us, and I fear that we may all live to see the day when we shall feel that the pendulum of educational reform has sprung too far in the direction of laboratory methods of instruction.

The future historian of medical education in America will probably point to the early years of the present century as the time when the elective system, already extensively employed in academic instruction, secured a foothold in the professional schools. The idea of election in medical studies is not, however, altogether a new one even at the present time. In post-graduate schools the right to choose the courses desired is the essential feature in their organization, and since the establishment of the compulsory four years' course, a portion of the instruction of the fourth year has in some of our schools been given in elective courses in various specialties.

Now no one is likely to question the desirability of every first-class medical school furnishing the most advanced instruction in all the departments of medicine. Such a school must, in fact, offer instruction in every subject which any student may desire to pursue, and this of course necessitates the adoption of some sort of an elective system, for it is obviously impossible for even the most intelligent students in the time allowed to assimilate all the various information which such a school may be expected to impart.

The only question is whether the choice of medical studies should be limited, as it practically is at the present time, to post-graduate schools or whether undergraduates in medicine shall be allowed a certain freedom in determining the direction of their medical work. Now there is probably no medical school of which it may not be said that in nearly every department many things are taught which are subsequently found to be of

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use to only a fraction of those receiving the instruction. Moreover this state of thing is frequently fully recognized by the students themselves who are thus encouraged to do perfunctory and superficial work. It is indeed well known that a certain number of medical students very early make up their minds either that they will become surgeons, obstetricians or specialists of some sort, or, on the other hand, that they have a strong aversion to certain branches of medicine and a determination never to practice them. For such students a prescribed curriculum necessarily involves great loss of time and energy.

Led by these and similar considerations the Harvard Faculty of Medicine recently addressed itself to the task of revising the course of study with a view of distinguishing between the *essential* and the *desirable* in medical education. The required instruction in every department was reduced to the limit of that which was considered absolutely necessary for the mental equipment of a safe practitioner of medicine and all the more advanced instruction was provided for in elective courses. It was thus found possible to condense the required instruction of the school into the first three years of the course leaving the fourth year to be wholly devoted to elective work. Hence at the end of the third year the Faculty practically says to tht students, "We now consider that you have received sufficiene training in all the matters of which no one who calls himself a physician can afford to be ignorant. We think you are not likely to make any serious error in the diagnosis and treatment of the ordinary diseases. We believe that you will know enough to call in the services of a specialist when your own knowledge fails We think that you have been so instructed in the fundamental principles of the various medical sciences that you can apply them successfully to the cases arising in your practice. We do not consider, however, that you are yet worthy of the Harvard M.D. degree. To obtain this distinction you must devote another year to medical study and in that year a wide choice of studies is open to you. If you wish to become a general practitioner of medicine take the elective courses in clinical medicine and frequent the general hospitals. If you desire to be a surgeon follow the courses in clinical surgery. If you incline toward any of the specialities take elective courses in the anatomy and physiology of the organs which interest you and follow the cliniques in those hospitals where those special diseases are treated. If you are particularly interested in any of the medical sciences take advanced instruction and research work in the laboratory devoted to the science of your choice."

It will be observed that an elective system thus arranged, while it permits, by no means compels an early specialization

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of medical study. In practice it will doubtless be found that the elective courses in the various specialties offered to fourth year students will be much the same as those of the post-graduate school. Thus it will be possible for students of medicine to take up special work at any time they may see fit. It is as yet too early to speak of the results of this method of instruction for the elective fourth year will go into operation for the first time in September, 1904. When, two years hence, Harvard invites her friends to help her inaugurate the new Medical School buildings it will be possible to report upon the subject as an accomplished fact instead of as a promising experiment.

In alluding to the new Medical School buildings I am led to speak of an architectural contribution which Harvard is making to the cause of Medical Education, viz., the so-called "Unit System of Laboratory Construction."

It is obvious that, if, in planning a group of laboratory buildings, it is found possible to make each laboratory consist of a series of rooms identical in size and general construction, great architectural economy can be secured. In administration also great advantages will result for, with the growth of the institution, it will be possible to accommodate one department in rooms originally planned for another, by merely changing the character of the furniture which they contain. Moreover the enlargement of a laboratory will, under this system, consist simply in the addition of a certain number of unit rooms and this process can be repeated as long as the building space holds out. The detailed plans by which these important results can be reached have been carefully worked out by Dr. C. S. Minot who I had hoped would be with us to day. In his absence I venture to make this brief allusion to a plan of construction which will be illustrated in our new Medical School buildings and which has been for him a matter of very careful study.

Such are some of the contributions which Harvard is making to the cause of medical education. Other schools are doing likewise. May the generous rivalry between the medical schools of the Western Hemisphere go on, for in it is involved the welfare of the human race.

### PROFESSOR CHITTENDEN, OF YALE UNIVERSITY.

*Mr. President, Ladies and Gentlemen:* I have the honor and the great pleasure of bringing to the University of Toronto greetings from Yale University, and from the American Physiological Society. We congratulate you upon all that has been accomplished in the past by this University in the domain of experimental and scientific medicine. And we look forward, Sir, with hope and with pride to the future, believing that with the increased facilities here offered still greater achievements

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will be accomplished. We congratulate you especially on what has been done here in the domain of physiology under the wise leadership of Professor Macallum. To me there is a special gratification in seeing the provision which has been made for furthering the study of physiological chemistry in this University. In this department of the science of medicine there is much to be done. Physiology, pathology and hygiene are all reaching out their hands to physiological chemistry asking for aid.

Many problems might be enumerated which readily suggest themselves, and which are closely connected and intimately associated with physiological chemistry. It seems to me—and I trust I do not exaggerate—that much of the immediate future advance in experimental and scientific medicine will be associated with the advance in physiological chemistry, and I feel like congratulating this University upon the provisions now being made for advanced study in physiological chemistry as a part of a study of physiology.

If I may be allowed to say one word more in this connection it would be this, there should not be a divorce of physiological chemistry from physiology. Physiological chemistry in my judgment should be considered as a part of physiology, and not an independent part. It may need a chemist to do the work, but the interpretation of the results and the value of the work, certainly for medicine, lies in the physiological interpretation; and physiological chemistry I think should be always connected or worked as a part of a broad department of physiology, not as an independent department.

The Yale University sends by me the message "God speed in your efforts to broaden and increase the fields of usefulness in the department of medicine in this University."

### PROFESSOR RODDICK, DEAN OF THE FACULTY OF MEDICINE, McGILL UNIVERSITY.

I have much pleasure in conveying a message of congratulation from the University of McGill in view of the increased facilities for teaching which have been recently provided in the University of Toronto. I desire also to express entire approval of the recent amalgamation which had taken place between the Faculties of Toronto and Trinity, and to state the belief that it is not impracticable or impossible for a general confederation of the Universities of Canada to take place. I am still very specially interested in the scheme of Dominion registration. I believe that the proposed Bill would have become law had it not been for the antagonism of the Province of Quebec. I trust, however, that an amendment would shortly be forthcoming, which would allow any group of Provinces to embrace the scheme.



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**PROFESSOR ABBOTT, OF THE UNIVERSITY OF PENNSYLVANIA.**

*Mr. President, Members of the Corporation, Ladies and Gentlemen:* I have the great privilege on this auspicious occasion of bringing greetings from the sister school on behalf of the University of Pennsylvania. I have the honor to offer their hearty congratulations upon the completion of this addition to your already splendid equipment. We believe that the results to accrue from the plan laid down by you will more than compensate for all the energy that has been expended in preparing these beautiful laboratories. With such facilities as we see about us, and such direction as the work is sure to receive from your able instructors, it is our belief that the University of Toronto more than ever before will take a prominent place among the factors that are operating for the good of medical education. Again, Sir, let me offer our hearty congratulations.

**PROFESSOR J. P. McMURRICH, OF THE UNIVERSITY OF MICHIGAN.**

As an old alumnist of the University of Toronto I have peculiar pleasure in being able to convey the congratulations of the sister University of Michigan, where they have recently opened a new Medical Building.

There was one argument which I think the President omitted, and which seems to me the most powerful of all; and the fact that the University of Toronto is now entering into these magnificent laboratories with chances to fulfil that argument leads me to speak of it—the argument from the enormous contributions which can be made to the material welfare of the country and otherwise by research done in medical laboratories. A single discovery will give to the country resources which cannot possibly be estimated in any terms fit to express them. A discovery such as that, for instance, which has recently been made in Harvard University by the Pathologist, Professor Councilman, is one which will amply repay for all the expenditure which a Government can possibly make throughout the life of a University, in what it will give us in the way of power to prevent and exterminate a scourge which carries away from us thousands of lives of the utmost value to the State.

**PROFESSOR L. F. BARKER, OF THE UNIVERSITY OF CHICAGO.**

After offering congratulations to the University of Toronto, from the University of Chicago, which granted more fellowships to Toronto graduates than to any other University in America, Professor L. F. Barker said :—

If one looks about him in the scientific world for the most striking characteristics of our times, he will find it, perhaps, in the systematic organization of investigative work. There has

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never before been a time when original research has been so carefully planned or so consciously directed as now. The world is tremendously impressed with the result of science attained during the last two centuries, but it would not be surprising, with the immense system of inquiry now in vogue, if during the twentieth century discoveries were made which would exceed in number and eclipse in grandeur those of all the centuries which have preceded.

In the forward march of science, great theories are originated, have their day, and are demolished. But it is surprising how often an old theory, thought to be thoroughly extinct, will be exhumed and resuscitated. Like Colonel Bogie of the golf links, a scientific bogie may he "downed" one day but it is likely to "down" its antagonists the next. The science of chemistry began with alchemy—the attempt of the ancients to manufacture gold out of the baser metals. Gradually the doctrine of the immutability of the "elements" developed and the efforts of the alchemists were believed to be attempts at the absolutely impossible; one who harbored their hopes was regarded as ridiculous. But the physicists and chemists have been making some startling discoveries in the recent past, as the results of which the elements have been shown to be less "immutable" than was thought. Each of them gives off radiations of minute particles, the so-called "electrons" or "ultimate corpuscles." each of which is at least 1,000 times lighter than the atom of hydrogen, and each of which so far as can be made out, is the same as every other particle of the same magnitude, no matter what its source.

It may not be true that the "element" Radium decomposes into the "element" Helium, as has already been asserted, but certain it is that physicists and chemists feel far less certain today of the elementary nature of the so-called elements than they have for a hundred years. Indeed, I heard one of the oldest chemists in America say about a fortnight ago, that in his opinion, the principal work of the laboratories of physics and chemistry during the next ten years would be devoted to attempts to analyze and synthesize the elements. It is amusing to think of the excitment among the gold-seeking alchemists of the middle ages—wherever they might be at the time—should some one be fortunate enough in the not too distant future, to take electrons derived, say, from iron and combine them into the precious metal, gold. That such a thing may be suggested even, shows us clearly the great changes which are going on in chemical thought.

Again there is the doctrine of "spontaneous generation" kept alive for so long by its supporters and especially by the unfortunate Bastian, until it was thoroughly extinguished by

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the researches of Tyndall and Pasteur. Would it be surprising if this dead doctrine were revivified? Surely no more so than the resurrection of alchemistic dreams. Those biologists who are busily engaged in the application of physical chemistry to the study of protoplasm are already cherishing again the possibility of something making living things from things not alive. Some of them even dare to say so, and others would like to say so, did they not fear that they would be suspected of carrying "bees in their bonnets." Truly, not all theories sleep that have closed eyes!

Professor Roswell Park, of the University of Buffalo, conveyed the congratulations of that institution to the University of Toronto. He was then followed by the Honorable Senator Sullivan, of the Medical Faculty of Queen's University, Kingston, who conveyed the congratulations of the institution which he represented.

A large body of students assembled in the University Gymnasium on the evening of October 1st to hear the opening lecture.

**PROFESSOR WM. OSLER, JOHNS HOPKINS UNIVERSITY.**

## THE MASTER-WORD IN MEDICINE.

Before proceeding to the pleasing duty of addressing the undergraduates, as a native of this province and as an old student of this school, I must say a few words on the momentous changes inaugurated with this session, the most important, perhaps, which have taken place in the history of the profession in Ontario. The splendid laboratories which we saw opened this afternoon, a witness to the appreciation by the authorities of the needs of science in medicine, makes possible the highest standards of education in the subjects upon which our Art is based. They may do more. A liberal policy, with a due regard to the truth that the greatness of a school lies in brains not bricks, should build up a great scientific centre which will bring renown to this city and to our country. The men in charge of the departments are of the right stamp. See to it that you treat them in the right way by giving skilled assistance enough to ensure that the vitality of men who could work for the world is not sapped by the routine of teaching. One regret will, I know, be in the minds of many of my younger hearers. The removal of the department of anatomy and physiology from the biological laboratory of the university breaks a connection which has had an important influence on medicine in this city. To Professor Ramsay Wright is due much of the inspiration which has made possible these fine new laboratories. For years he has encouraged in every way the cultivation of the scientific branches of medicine and has unselfishly devoted much time to promoting the best interests of the

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Medical Faculty. And in passing let me pay a tribute to the ability and zeal with which Dr. A. B. Macallum has won for himself a world-wide reputation by intricate studies which have carried the name of this University to every nook and corner of the globe where the science of physiology is cultivated. How much you owe to him in connection with the new buildings I need scarcely mention in this audience.

But the other event which we celebrate is of much greater importance. When the money is forthcoming it is an easy matter to join stone to stone in a stately edifice, but it is hard to find the market in which to buy the precious cement which can unite into an harmonious body the professors of medicine of two rival medical schools in the same city. That this has been accomplished so satisfactorily is a tribute to the good sense of the leaders of the two faculties, and tells of their recognition of the needs of the profession in the province. Is it too much to look forward to the absorption or affiliation of the Kingston and London schools into the Provincial University? The day has passed in which the small school without full endowment can live a life beneficial to the students, to the profession or to the public. I know well of the sacrifice of time and money which is freely made by the teachers of those schools; and they will not misunderstand my motives when I urge them to commit suicide, at least so far as to change their organizations into clinical schools in affiliation with the central university, as part, perhaps, of a widespread affiliation of the hospitals of the province. A school of the first rank in the world, such as this must become, should have ample clinical facilities under its own control. It is as much a necessity that the professors of medicine and surgery, etc., should have large hospital services under their control throughout the year, as it is that professors of pathology and physiology should have laboratories such as those in which we here meet. It should be an easy matter to arrange between the provincial authorities and the trustees of the Toronto General Hospital to replace the present antiquated system of multiple small services by modern well equipped clinics—three in medicine and three in surgery to begin with. The increased efficiency of the service would be a substantial *quid pro quo*, but there would have to be a self-denying ordinance on the part of many of the attending physicians. With the large number of students in the combined school no one Hospital can furnish in practical medicine, surgery and the specialties a training in the art an equivalent of that which the student will have in the sciences in the new laboratories. An affiliation should be sought with every other hospital in the city and province of fifty beds and over, in each of which two or three extra-mural teachers could be recognized,

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who would receive for three or more months a number of students proportionate to the beds in the hospital. I need not mention names. We all know men in Ottawa, Kingston, London, Hamilton, Guelph and Chatham, who could take charge of small groups of the senior students and make of them good practical doctors. I merely throw out the suggestion. There are difficulties in the way; but is there anything in this life worth struggling for which does not bristle with them?

Students of Medicine: May this day be to each of you, as it was to me when I entered this school thirty-five years ago, the beginning of a happy life in a happy calling. Not one of you has come here with such a feeling of relief as that which I experienced at an escape from conic sections and logarithms and from Hooker and Pearson. The dry bones became clothed with interest, and I felt that I had at last got to work. Of the greater advantages with which you start I shall not speak. Why waste my words on what you cannot understand. To those of us only who taught and studied in the dingy old building which stood near here is it given to feel the full change which the years have wrought, a change which my old teachers, whom I see here to-day—Dr. Richardson, Dr. Ogden, Dr. Thorburn and Dr. Oldright—must find hard to realize. One looks about in vain for some accustomed object on which to rest the eye in its backward glance—all, all are gone; the old familiar places. Even the landscape has altered, and the sense of loneliness and regret, the sort of homesickness one experiences on such occasions, is relieved by a feeling of thankfulness that at least some of the old familiar faces have been spared to see this day. To me at least the memory of those happy days is a perpetual benediction, and I look back upon the two years I spent at this school with the greatest delight. There were many things that might have been improved—and we can say the same of every medical school of that period—but I seem to have got much more out of it than our distinguished philospher friend, J. Beattie Crozier, whose picture of the period seems hardly drawn. But after all, as someone has remarked, instruction is often the least part of an education, and, as I recall them, our teachers in their life and doctrine set forth a true and lively word to the great enlightenment of our darkness. They stand out in the background of my memory as a group of men whose influence and example were most helpful. In William R. Beaumont and Edward Mulberry Hodder, we had before us the highest type of the cultivated English surgeon. In Henry H. Wright we saw the incarnation of faithful devotion to duty—too faithful, we thought, as we trudged up to the eight o'clock lecture in the morning. In W. T. Aikins, a practical surgeon of

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remarkable skill and an ideal teacher for the general practitioner How we wondered and delighted in the anatomical demonstrations of Dr. Richardson, whose infective enthusiasm did much to make anatomy the favorite subject among the students. I had the double advantage of attending the last course of Dr. Ogden and the first of Dr. Thorburn on materia medica and therapeutics. And Dr. Oldright has just begun his career of unselfish devotion to the cause of hygiene.

To one of my teachers I must pay in passing the tribute of filial affection. There are men here to-day who feel as I do about Dr. James Bovell—that he was one of those finer spirits, not uncommon in life, touched to finer issues only in a suitable environment. Would the Paul of evolution have been Thomas Henry Huxley had the Senate elected the young naturalist to a chair in this university in 1851? Only men of a certain metal rise superior to their surroundings, and while Dr. Bovell had that all important combination of boundless ambition with energy and industry, he had that fatal fault of diffuseness, in which even genius is strangled. With a quadrilateral mind, which he kept spinning like a teetotum, one side was never kept uppermost for long at a time. Caught in the storm which shook the scientific world with the publication of the *Origin of Species*, instead of sailing before the wind, even were it with bare poles, he put about and sought a harbor of refuge in writing a work on Natural Theology, which you will find on the shelves of second-hand book shops in a company made respectable at least by the presence of Paley. He was an omnivorous reader and transmutor, he could talk pleasantly, even at times transcendentally, upon anything in the science of the day, from protoplasm to evolution; but he lacked concentration and that scientific accuracy which only comes with a long training (sometimes, indeed, never comes), and which is the ballast of the boat. But the bent of his mind was devotional, and early swept into the Tractarian movement, he became an advanced Churchman, a good Anglican Catholic. As he chaffingly remarked one day to his friend, the Rev. Mr. Darling, he was like the waterman in Pilgrim's Progress, rowing one way towards Rome, but looking steadfastly in the other direction towards Lambeth. His "Steps to the Altar" and his "Lectures on the Advent" attest the earnestness of his convictions; and later in life, following the example of Linacre, he took orders and became another illustration of what Cotton Mather calls the angelic conjunction of medicine with divinity. Then, how well I recall the keen love with which he would engage in metaphysical discussions, and the ardor with which he studied Kant, Hamilton, Reed and Mill. At that day, too, the Rev. Prof. Bevan was intrusted the rare privilege of directing

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the minds of the thinking youths at the Provincial University into proper philosophical channels. It was rumored that the hungry sheep looked up and were not fed. I thought so at least, for certain of them, led by T. Wesley Mills, came over daily after Dr. Bovell's four o'clock lecture to reason high and long with him

> "On Providence, Foreknowledge, Will and Fate
> Fixed Fate, Freewill, Foreknowledge absolute."

Yet withal, his main business in life was as a physician, much sought after for his skill in diagnosis, and much beloved for his loving heart. He had been brought up in the very best practical schools. A pupil of Bright and of Addison, a warm personal friend of Stokes and of Graves, he maintained loyally the traditions of Guy's, and taught us to reverence his great masters. As a teacher he had grasped the fundamental truth announced by John Hunter of the unity of physiological and pathological processes, and, as became the occupant of the chair of the Institutes of Medicine, he would discourse on pathological processes in lectures on physiology, and illustrate the physiology of bioplasm in lectures on the pathology of tumors to the bewilderment of the students. When in September, 1870, he wrote to me that he did not intend to return from the West Indies I felt that I had lost a father and a friend; but in Robert Palmer Howard, of Montreal, I found a noble stepfather, and to these two men, and to my first teacher, the Rev. W. A. Johnson, of Weston, I owe my success in life—if success means getting what you want and being satisfied with it.

## II.

Of the value of an introductory lecture I am not altogether certain. I do not remember to have derived any enduring benefit from the many that I have been called upon to hear, or from the not a few that I have inflicted in my day. On the whole, I am in favor of abolishing the old custom, but as this is a very special occasion, with special addresses, I consider myself most happy to have been selected for this part of the programme. To the audience at large I fear that what I have to say will appear trite and commonplace, but bear with me, since, indeed, to most of you how good soever the word, the season is long past in which it could be spoken to your edification. As I glance from face to face the most striking single peculiarity is the extraordinary diversity that exists among you. Alike in that you are men and white, you are unlike in your features, very unlike in your minds and in your mental training, and your teachers will mourn the singular inequalities in your capacities. And so it is sad to think will be your careers; for one

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success, for another failure; one will tread the primrose path to the great bonfire, another the straight and narrow way to renown; some of the best of you will be stricken early on the road, and will join that noble band of youthful martyrs who loved not their lives to the death; others, perhaps the most brilliant among you, like my old friend and comrade, Dick Zimmerman (how he would have rejoiced to see this day!), the Fates will overtake and whirl to destruction just as success seems assured. When the iniquity of oblivion has blindly scattered her poppy over us, some of you will be the trusted counsellors of this community, and the heads of departments of this Faculty; while for the large majority of you, let us hope, is reserved the happiest and most useful lot given to man —to become vigorous, whole-souled intelligent general practitioners.

It seems a bounden duty on such an occasion to be honest and frank, so I propose to tell you the secret of life as I have seen the game played, and as I have tried to play it myself. You remember in one of the Jungle Stories that when Mowgli wished to be avenged on the villagers he could only get the help of Hathi and his sons by sending them the master-word. This I propose to give you in the hope, yes, in the full assurance, that some of you at least will lay hold upon it to your profit. Though a little one, the master-word looms large in meaning. It is the open sesame to every portal, the great equalizer in the world, the true philosopher's stone, which transmutes all the base metal of humanity into gold. The stupid man among you it will make bright, the bright man brilliant, and the brilliant student steady. With the magic word in your heart all things are possible, and without it all study is vanity and vexation. The miracles of life are with it; the blind see by touch, the deaf hear with eyes, the dumb speak with fingers. To the youth it brings hope, to the middle-aged confidence, to the aged repose. True balm of hurt minds, in its presence the heart of the sorrowful is lightened and consoled. It is directly responsible for all advances in medicine during the past twenty-five centuries. Laying hold upon it Hippocrates made observation and science the warp and woof of our art. Galen so read its meaning that fifteen centuries stopped thinking, and slept until awakened by the *De Fabrica* of Vesalius, which is the very incarnation of the master-word. With its inspiration Harvey gave an impulse to a larger circulation than he wot of, an impulse which we feel to-day. Hunter sounded all its heights and depths, and stands out in our history as one of the great exemplars of its virtues. With it Virchow smote the rock, and the waters of progress gushed out while in the hands of Pasteur it proved a very talisman to open to us a

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new heaven in medicine and a new earth in surgery. Not only has it been the touchstone of progress, but it is the measure of success in every-day life. Not a man before you but is beholden to it for his position here, while he who addresses you has that honor directly in consequence of having had it graven on his heart when he was as you are to-day. And the master-word is *Work*, a little one, as I have said, but fraught with momentous sequences if you can but write it on the tablets of your hearts and bind it upon your foreheads. But there is a serious difficulty in getting you to understand the paramount importance of the work-habit as part of your organization. You are not far from the Tom Sawyer stage with its philosophy "that work consists of whatever a body is obliged to do, and that play consists of whatever a body is not obliged to do."

A great many hard things may be said of the work-habit. For most of us it means a hard battle; the few take to it naturally; the many prefer idleness and never learn to love labor. Listen to this: "Look at one of your industrious fellows for a moment, I beseech you," says Robert Louis Stevenson. "He sows hurry and reaps indigestion; he puts a vast deal of activity out to interest, and receives a large measure of nervous derangement in return. Either he absents himself entirely from all fellowship, and lives a recluse in a garret, with carpet slippers and a leaden inkpot, or he comes among people swiftly and bitterly, in a contraction of his whole nervous system, to discharge some temper before he returns to work. I do not care how much or how well he works, this fellow is an evil feature in other people's lives." These are the sentiments of an overworked, dejected man; let me quote the motto of his saner moments: "To travel hopefully is better than to arrive, and the true success is in labor." If you wish to learn of the miseries of scholars in order to avoid them, read Part I, Section 2, Member 3, Subsection XV. of that immortal work, the Anatomy of Melancholy, but I am here to warn you against these evils, and to entreat you to form good habits in your student days.

At the outset appreciate clearly the aims and objects each one of you should have in view—a knowledge of disease and its cure, and a knowledge of yourselves. The one, a special education, will make you a practitioner of medicine; the other, an inner education, may make you a truly good man, four square and without a flaw. The one is extrinsic and is largely accomplished by teacher and tutor, by text and by tongue; the other is intrinsic and is the mental salvation to be wrought out by each one for himself. The first may be had without the second; any one of you may become an active practitioner, without ever having had sense enough to realize that through life you have been a fool; or you may have the second without

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the first, and, without knowing much of the art, you may have the endowments of head and heart that make the little you do possess go very far in the community. With what I hope to infect you is a desire to have a due proportion of each.

So far as your professional education is concerned, what I shall say may make for each one of you an easy path easier. The multiplicity of the subjects to be studied is a difficulty, and it is hard for teacher and student to get a due sense of proportion in the work. We are in a transition stage in our methods of teachings, and have not everywhere got away from the idea of the examination as the "be-all and end-all;" so that the student has constantly before his eyes the magical letters of the degree he seeks. And this is well, perhaps, if you will remember that having, in the old phrase, commenced Bachelor of Medicine, you have only reached a point from which you can begin a life-long process of education.

So many and varied are the aspects presented by this theme that I can only lay stress upon a few of the more essential. The very first step towards success in any occupation is to become interested in it. Locke put this in a very happy way when he said, give a pupil "a relish of knowledge" and you put life into his work. And there is nothing more certain than that you cannot study well if you are not interested in your profession. Your presence here is a warrant that in some way you have become attracted to the study of medicine, but the speculative possibilities so warmly cherished at the outset are apt to cool when in contact with the stern realities of the class-room. Most of you have already experienced the all absorbing attraction of the scientific branches, and nowadays the practical method of presentation has given a zest which was usually lacking in the old theoretical teaching. The life has become more serious in consequence, and medical students have put away many of the childish tricks with which we used to keep up their bad name. Compare the picture of the "sawbones" of 1842, as given in the recent biography of Sir Henry Ackland, with the representatives to-day, and it is evident a great revolution has been effected, and very largely by the salutary influences of improved methods of education. It is possible now to fill out a day with practical work, varied enough to prevent monotony, and so arranged that the knowledge is picked out by the student himself, and not thrust into him, willy-nilly, at the point of the tongue. He exercises his wits and is no longer a passive Strassbourg goose, tied up and stuffed to repletion.

How can you take the greatest possible advantage of your capacities with the least possible strain? By cultivating system. I say cultivating advisedly, since some of you will find the acquisition of systematic habits very hard. There are

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minds congenitally systematic; others have a life-long fight against an inherited tendency to diffuseness and carelessness in work. A few brilliant fellows try to dispense with it altogether, but they are a burden to their brethren and a sore trial to their intimates. I have heard it remarked that order is the badge of an ordinary mind. So it may be, but as practitioners of medicine we have to be thankful to get into their useful class. Let me entreat those of you who are here for the first time to lay to heart what I say on this matter. Forget all else, but take away this counsel of a man who has had to fight a hard battle, and not always a successful one, for the little order he has had in his life; take away with you a profound conviction of the value of system in your work. I appeal to the freshmen especially, because you to-day make a beginning, and your future career depends very much upon the habits you will form during this session. To follow the routine of the classes is easy enough, but to take routine into every part of your daily life is a hard task. Some of you will start out joyfully as did Christian and Hopeful, and for many days will journey safely towards the Delectable Mountains, dreaming of them and not thinking of disaster until you find yourselves in the strong captivity of Doubt and under the grinding tyranny of Despair. You have been over confident. Begin again and more cautiously. No student escapes wholly from these perils and trials; be not disheartened, expect them. Let each hour of the day have its allotted duty, and cultivate that power of concentration which grows with its exercise, so that the attention neither flags nor wavers, but settles with a bull-dog tenacity on the subject before you. Constant repetition makes a good habit fit easily in your mind, and by the end of the session you may have gained that most precious of all knowledge—the power to work. Do not underestimate the difficulty you will have in wringing from your reluctant selves the stern determination to exact the uttermost minute on your schedule. Do not get too interested in one study at the expense of another, but so map out your day that due allowance is given to each. Only in this way can the average student get the best that he can out of his capacities. And it is worth all the pains and trouble he can possibly take for the ultimate gain—if he can reach his doctorate with system so ingrained that it has become an integral part of his being. The artistic sense of perfection in work is another much to be desired quality to be cultivated. No matter how trifling the matter on hand, do it with a feeling that it demands the best that is in you, and when done look it over with a critical eye, not sparing a strict judgment of yourself. This it is that makes anatomy a student's touch-stone. Take the man who does his "part" to perfection, who has got out all there is

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in it, who labors over the tags of connective tissue and who demonstrates Meckel's ganglion in his part—this is the fellow in after years who is apt in emergencies, who saves a leg badly smashed in a railway accident, or fights out to the finish, never knowing when he is beaten, in a case of typhoid fever.

Learn to love the freedom of the student life, only too quickly to pass away; the absence of the coarser cares of after days, the joy in comradeship, the delight in new work, the happiness in knowing that you are making progress. Once only can you enjoy these pleasures. The seclusion of the student life is not always good for a man, particularly for those of you who will afterwards engage in general practice, since you will miss that faculty of intercourse upon which often the doctor's success depends. On the other hand sequestration is essential for those of you with high ambitions proportionate to your capacity. It was for such that St. Chrysostom gave his famous counsel, "Depart from the highways and transplant thyself into some enclosed ground, for it is hard for a tree that stands by the wayside to keep its fruit till it be ripe."

Has work no dangers connected with it? What of this bogie of overwork of which we hear so much? There are dangers, but they may readily be avoided with a little care. I can only mention two, one physical, one mental. The very best students are often not the strongest. Ill-health, the bridle of Theages, as Plato called it in the case of one of his friends whose mind had thriven at the expense of his body, may have been the diverting influence towards books or the profession. Among the good men who have studied with me there stands out in my remembrance many a young Lycidas, "dead ere his prime." sacrificed to carelessness in habits of living and neglect of ordinary sanitary laws. Medical students are much exposed to infection of all sorts, to combat which the body must be kept in first-class condition. Grossteste, the great Bishop of Lincoln, remarked that there were three things necessary for temporal salvation—food, sleep and a cheerful disposition. Add to these suitable exercise and you have the means by which good health may be maintained. Not that health is to be a matter of perpetual solicitation, but habits which favor the *corpus sanum* foster the *mens sana*, in which the joy of living and the joy of working are blended in one harmony. Let me read you a quotation from old Burton, the great authority on *morbi eruditorum*. There are "many reasons why students dote more often than others. The first is their negligence; other men look to their tools, a painter will wash his pencils, a smith will look to his hammer, anvil, forge; a husbandman will mend his plough-irons, and grind his hatchet, if it be dull; a falconer or huntsman will have an especial care of his hawks, hounds,

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horses, dogs, etc.; a musician will string and unstring his lute, etc.; only scholars neglect that instrument, their brain and spirits (I mean) which they daily use."*

Much study is not only believed to be a weariness of the flesh, but also an active cause of ill-health of mind, in all grades and phases. I deny that work, legitimate work, has anything to do with this. It is that foul fiend Worry who is responsible for a large majority of the cases. The more carefully one looks into the causes of nervous breakdown in students, the less important is work *per se* as a factor. There are a few cases of genuine overwork, but they are not common. Of the causes of worry in the student life there are three of prime importance to which I may briefly refer.

An anticipatory attitude of mind, a perpetual forecasting, disturbs the even tenor of his way and leads to disaster. Years ago a sentence in one of Carlyle's essays made a lasting impression on me: "Our duty is not to *see* what lies dimly at a distance, but to *do* what lies clearly at hand." I have long maintained that the best motto for a student is, "Take no thought for the morrow." Let the day's work suffice; live for it, regardless of what the future has in store, believing that tomorrow should take thought for the things of itself. There is no such safeguard against the morbid apprehensions about the future, the dread of examinations and the doubt of the ultimate success. Nor is there any risk that such an attitude may breed carelessness. On the contrary, the absorption in the duty of the hour is in itself the best guarantee of ultimate success. "He that observeth the wind shall not sow, and he that regardeth the clouds shall not reap," which means you cannot work profitably with your mind set upon the future.

Another potent cause of worry is an idolatry by which many of you will be sore let and hindered. The mistress of your studies should be the heavenly Aphrodite, the motherless daughter of Uranus. Give her your whole heart, and she will be you protectress and friend. A jealous creature, brooking no second, if she finds you trifling and coquetting with her rival, the younger, earthly Aphrodite, daughter of Zeus and Dione, she will whistle you off and let you down the wind to be a prey, perhaps to the examiners, certainly to the worm regret. In plainer language, put your affections in cold storage for a few years, and you will take them out ripened, perhaps a bit mellow, but certainly less subject to those frequent changes which perplex so many young men. Only a grand passion, an all-absorbing devotion to the elder goddess can save the man with a congenital tendency to philandering, the flighty Lydgate who sports with Celia and Dorothea, and upon whom the

* *Quotation mainly from Marsilius Ficinus.*

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judgment ultimately falls in a basil-plant of a wife like Rosamond.

And thirdly, one and all of you will have to face the ordeal of every student in this generation who sooner or later tries to mix the waters of science with the oil of faith. You can have a great deal of both if you only keep them separate. The worry comes from the attempt at mixture. As general practitioners you will need all the faith you can carry, and while it may not always be of the conventional pattern, when expressed in your lives rather than on your lips, the variety is not a bad one from the standpoint of St. James: and may help to counteract the common scandal alluded to in the celebrated diary of that gossipy old pastor-doctor, the Rev. John Ward: "One told the Bishop of Gloucester that he imagined physicians of all other men the most competent judges of all others affairs of religion—and his reason was because they were wholly unconcerned with it."

## III.

Professional work of any sort tends to narrow the mind, to limit the point of view and to put a hall-mark on a man of a most unmistakable kind. On the one hand are the intense, ardent natures, absorbed in their studies and quickly losing interest in everything but their profession, while other faculties and interests "fust" unsued. On the other hand are the bovine brethren, who think of nothing but the treadmill and the corn. From very different causes, the one from concentration, the other from apathy, both are apt to neglect those outside studies that widen the sympathies and help a man to get the best there is out of life. Like art, medicine is an exacting mistress, and in the pursuit of one of the scientific branches, sometimes, too, in practice, not a portion of a man's spirit may be left free for other distractions, but this does not often happen. On account of the intimate personal nature of his work, the medical man, perhaps more than any other man, needs that higher education of which Plato speaks,—"that education in virtue from youth upwards, which enables a man eagerly to pursue the ideal perfection." It is not for all, nor can all attain to it, but there is comfort and help in the pursuit, even though the end is never reached. For a large majority the daily round and the common task furnish more than enough to satisfy their heart's desire, and there seems no room left for anything else. Like the good, easy man whom Milton scores in the Areopagitica, whose religion was a "traffic so entangled that of all mysteries he could not skill to keep a stock going upon that trade" and handed it over with all the locks and keys to "a

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fight. Theoretically there seems to be no difficulty, but when the concrete wound is rankling, and after Mrs. Jones has rubbed in the cayenne pepper by declaring that Dr. J. told her in confidence of your shocking bungling, your attitude of mind is that you would rather see him in purgatory than make advances towards reconciliation. Wait until the day of your trial comes and then remember my words.

And in closing, may I say a few words to the younger practitioners in the audience whose activities will wax not wane with the growing years of the century which opens so auspiciously for this school, for this city, and for our country. You enter a noble heritage, made by no efforts of your own, but by the generations of men who have unselfishly sought to do the best they could for suffering mankind. Much has been done, much remains to do; a way has been opened, and to the possibilities in the scientific development of medicine there seems to be no limit. Except in its application, as general practitioners, you will not have much to do with this. Yours is a higher and more sacred duty. Think not to light a light to shine before men that they may see your good works; contrariwise you belong to the great army of quiet workers, physicians and priests, sisters and nurses, all over the world, the members of which strive not neither do they cry, nor are their voices heard in the streets, but to them is given the ministry of consolation in sorrow, need, and sickness. Like the ideal wife of whom Plutarch speaks, the best doctor is often the one of whom the public hears the least; but nowadays, in the fierce light that beats upon the earth, it is increasingly difficult to lead the secluded life in which our best work is done. To you the silent workers of the ranks, in villages and country districts, in the slums of our large cities, in the mining camps and factory towns, in the homes of the rich, and in the hovels of the poor, to you is given the harder task of illustrating with your lives the Hippocratic standards of Learning, of Sagacity, of Humanity, and of Probity. Of learning, that you may apply in your practice the best that is known in our art, and that with the increase in your knowledge there may be an increase in that priceless endowment of sagacity, so that to all, everywhere, skilled succor may come in the hour of need. Of a humanity, that will show in your daily life tenderness and consideration to the weak, infinite pity to the suffering, and broad charity to all. Of a probity, that will make you under all circumstances true to yourselves, true to your high calling, and true to your fellow man.

After Professor Osler's address the Dean of the Faculty of Medicine, Professor R. A. Reeve, addressed the students and conveyed the thanks of the Faculty of Medicine to the lecturer

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of the evening. He stated that in his opinion it was very fitting that we should have endeavored to secure the presence here of some of the leading men of the larger and older institutions of learning in the United States and in the Motherland to celebrate the double consummation, the completion of our medical buildings, which embodies some principles, which, for the first time, have found expression in a structure of this kind, and in the union of the Medical Faculties of Toronto and Trinity.

Professor J. Algernon Temple, lately Dean of the Faculty of Medicine of the University of Trinity, addressed the audience. He expressed the regret which he said was shared by his colleagues, in abandoning the old Trinity Medical College, where he has devoted much time and energy in teaching for the past 27 or 28 years, and from whose halls many illustrious men have graduated. Whilst making these sacrifices, however, he believed sincerely that the step was in the interest of medical education in this Province, and in the interests of the two schools which had amalgamated.

### VISITORS' ADDRESSES.

On Friday morning the students had the advantage and opportunity of listening to addresses by several of the Visiting Professors. In the large north lecture theatre Prof. W. W. Keen, of Jefferson, spoke to them on Literary Methods in Medicine, giving excellent and well-matured advice as to their reading, note-taking, case-recording and record-filing.

Prof. Welch, of Johns Hopkins, eloquently portrayed the importance and advantage of their pathological studies and their bearing upon successful and scientific practice.

Prof. Adami, of McGill, took up the same parable, and earnestly impressed all his hearers with the necessity of bringing up the Clinical Laboratory and Hospital work to a level with the present excellent position of Physiology and Pathology in the University.

Professor Abbott, of the University of Pennsylvania, then spoke upon the importance of Hygiene and Preventive Medicine in the Medical Course. He clearly pointed out the duty of the Medical Practitioner to the state, and illustrated, by the citation of instances, the widespread calamities which result from the neglect or the perfunctory performance of this duty. He humorously showed how this department of preventive medicine, although the youngest, exercised the greatest influence in the community, and was occasionally, as now in New York, the basis and groundwork of a municipal campaign and, as formerly in England, the rallying cry of a great political party "Sanitas Sanitatum."

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In the south lecture room Professor Chittenden addressed the classes of the primary years and he dwelt on the necessity to the medical student of having a thorough preparation in the sciences at the foundation of medicine. He pointed out that it is impossible for the physician to rightly interpret pathological phenomena unless he has a fair knowledge of biology, physics, chemistry, physiology, and physiological chemistry. The possession of a good knowledge of these subjects gives an immense advantage to the physician in the exercise of his calling. Professor Sherrington spoke of the changes that had taken place in the requirements of the medical curriculum, and advised the students to cultivate thoroughness in their studies.

Professor Porter described the Harvard method of teaching physiology to medical students, and emphasized the fact that it is not what you know from the point of view of theory that is all important, but the knowledge of the manner in which the facts and generalizations of physiology were obtained. Unless a student is properly trained in this way, he may fail utterly in interpreting physiological phenomena, even if he have access to all the literature on physiology.

Professor Barker strongly advocated the view that every medical student should be able to read French and German, and he should also early acquire a knowledge of medical reference literature in order that he might at once, when called upon to do so, be in a position to consult the publications on any particular subject.

### SPECIAL CONVOCATION.

Special Convocation for conferring honorary degrees was held in the University Gymnasium on the afternoon of Friday October 22nd, the Vice-Chancellor, the Hon. Chief Justice Moss, presiding.

### PROFESSOR W. W. KEEN, JEFFERSON MEDICAL COLLEGE, PHILADELPHIA.

Professor Cameron presented William Williams Keen, M.A., M.D., LL.D., Professor of Surgery, Jefferson Medical College, Philadelphia, for the degree of LL.D. Dr. Keen then addressed the Convocation.

*Mr. Vice-Chancellor, Mr. President, Students of the Medical Department of the University of Toronto, Ladies and Gentlemen :—*

I thank you most sincerely for the unexpected honor of this degree, an honor which I shall always remember with the greatest pleasure. In doing so, it gives me great pleasure to join my congratulations with those which have been so happily

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expressed by others of your honored guests upon the erection of your new building for physiology, physiological chemistry, pathology, and public health. These branches of medicine, with anatomy, which already has an admirable home, are fundamental, and the progress of medicine, surgery, obstetrics, and all the specialties is conditioned, first of all, upon progress in these departments.

The laws governing the action of all forces—such as power when applied by the lever, the pulley, the inclined plane or the screw, the forces of heat, light, electricity, magnetism and steam —are first discovered. Then come the practical applications of these forces through machines by which we can use them. In the wake of such theoretical knowledge have come the balance, the printing press, the steam engine, the locomotive, the dynamo, the trolley, the telegraph, the telephone, etc. These are the machines which minister to civilization, and have transformed modern life. Were it not for the unwearied theoretical study in the laboratory, by which the abstruse laws governing these forces have been discovered and accurately stated, we should be groping in the dark and wasting our time, our money and our opportunities. In 1903, we would be as our fathers were in 1803. Just so in medicine. The same patient laboratory workers must be encouraged by the facilities which you have now provided for them to solve the problems of physiology (that is, the study of the various organs in their normal condition), of pathology (that is, the study of the various organs in diseased conditions), the complex reactions of chemistry (which, in the future, far more than in the past, will aid us both in physiology and pathology), and of public health, which will diminish the suffering, promote the well-being, and prolong the lives of the entire community.

You have provided now the external physical conditions for successful study. The intelligent young men around you, yearning for distinguished careers in science, will be swift to take advantage of such splendid opportunities, and will be the best guarantee that the moral and intellectual conditions shall equal the physical.

Those not wholly familiar with the progress of medicine in the last two or three decades may think, in view of the enormous and well-known progress made by medicine, surgery and bacteriology, that medical science may have reached its limits, and may wonder whether there are any other worlds to conquer.

Worlds to conquer? Aye! scores of them! The solution of each problem does but reveal two or three new ones; increase of knowledge but shows us how little we really know. Professor Welch's Huxley Lecture, which disclosed the marvelous

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progress made in the study of immunity, showed a still larger world of the unknown which must be subdued. The surgeon longs for such an intimate knowledge of sepsis as will enable him to convert an already septic wound into an aseptic wound; and that the cause and then the cure of cancer, and other similar diseases, may be vouchsafed to him; the physician is seeking for the germs of scarlet fever, typhus fever, chicken-pox, whooping cough, measles; the pathologist is questioning the blood and slowly compelling it to disclose the secret foes and friends of health floating in its crimson tide; the physiologist is investigating the internal secretions; and the therapeutist is experimenting upon the various antitoxins and immunizing serums. The darkness of the night of ignorance is gradually fading, the dawn is lighting up the eastern sky, some day the glorious sun of complete knowledge will appear above the horizon to flood the world with its bright rays.

But you need more than these fundamental branches, without which no progress could be made. The "final cause," the ultimate reason for the existence of the doctor is to alleviate suffering and cure disease. When well grounded in the fundamental branches, for which you have now made provision, he must learn how to apply this knowledge to actual sick and suffering men, women and children. How shall he learn to do this? It must either be from lectures and books, when he hears and reads about disease, or by coming directly in contact with disease itself in living but suffering men, women and children. Which method shall be adopted?

You have bought a fine watch, a locomotive, a steam yacht, or have built a costly electric plant. You seek a skilled watchmaker to repair your watch, or you want to engage an engineer to run one of those complicated machines. Which will you choose, the watchmaker or the engineer who has only listened to lectures and read books on watchmaking, electricity, steam, the dynamo, the locomotive and ships' engines, or the man who has not only become theoretically familiar with their construction, but has actually handled them till every part is as familiar as his own bedroom, who has taken them apart and put them together again scores of times, and has healed sick watches and cured sick engines? To ask the question is to answer it. Will you do better by your watches, your engines, your yacht, your electrical plant, which only cost money, than by your bodies, which are indissolubly bound up with your very lives and the happiness of those dearer to you than your own lives?

The great daily laboratory of the medical profession is the sick-room. To be equal to his task therefore, the doctor, even when he graduates, must be familiar with actual patients and

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not be compelled to learn by blunders, the penalty for which is paid by his patients in shattered health or tedious convalescence, or by ghastly mistakes, each of which has cost a life. You must, therefore, provide a complete university hospital in which hundreds of the sick and suffering will find relief at the hands of your devoted and skilful Faculty and at the same time afford the students the occasion for study and observation, for case taking, for dressing of wounds, and for clinical and bacteriological examinations, and so learn the chameleon phases of disease, the means of cure, and the methods of operating. This hospital must have also not only its wards for those actually sick or dangerously injured, but a large out-patient department for every specialty, for those whose illness, or accident, or injury does not require them to leave their homes and their families and enter a hospital, but who can be cared for by simply visiting the hospital at suitable intervals. Here the minor accidents and ailments may be early and easily cured, and so prevented from threatening life or limb. In these out-patient departments your students will see all the usual forms of disease and be trained in their proper treatment.

It is sometimes objected by those who are not familiar with the actual facts, that this method of actual bedside instruction does harm to the sick. May I quote in reply what I said in an address to the Congress of American Physicians and Surgeons last May: "I speak after an experience of nearly forty years as surgeon to half a dozen hospitals, and I can confidently say that I have never known a *single patient* injured or his chances of recovery lessened by such teaching. Moreover, who will be least slovenly and careless in his duties, he who prescribes in the solitude of the sick chamber, or operates with two or three assistants only, or he whose every moment is eagerly watched by hundreds of eyes, alert to detect every false step, he omission of an important clinical laboratory investigation, the neglect of the careful examination of the back as well as of the front of the chest, the failure to detect any important physical sign or symptom? Who will be most certain to keep up with the progress of medical science, he who works alone with no one to discover his ignorance, or he who is surrounded by a lot of bright young fellows who have read the last *Lancet*, or the newest *Annals of Surgery*, and can trip him up if he is not abreast of the times? I always feel at the Jefferson Hospital as if I were on the run with a pack of lively dogs at my heels. I cannot afford to have the youngsters familiar with operations, the means of investigations, or the newer methods of treatment of which I am ignorant. I must, perforce, study, read, catalogue, and remember; or give place to others who will. Students are the best whip and spur I know. The poor-

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est charity patient in a hospital often has his disease more thoroughly investigated and has a better chance of recovery than a well-to-do or even rich patient, because a hospital affords the means for such complicated investigations which are not possible in private practice.

Such a hospital and out-patient department should be under the control of the Trustees and Faculty, and all its beds and other facilities should be wholly given up to the teaching Faculty. Much friction will thus be avoided; the professors of medicine, surgery and other branches will be the physicians, surgeons, etc., to the hospital by right, and not by courtesy, and the didactic instruction in the college and the clinical instruction in the hospital will be most advantageously correlated. College, hospital, out-patient department and laboratory are all parts of one great medical machine. Cut off or dislocate one, and all are crippled; the education of your own family physicians, your surgeons, your obstetricians, and your specialists is marred; and you, men and women of Toronto, and your children, and all of Canada, will suffer.

One thing more is needed to carry out this scheme—large endowments. Modern medical teaching is excessively expensive, because it has become so largely individual instead of to great classes, and so the teaching force has had to be enormously increased; and because it is chiefly in the laboratory which demands expensive buildings, costly equipment, and still more instructors. Has it ever occurred to you that universities are the only bodies which sell their wares below cost? Railroads, industrial plants, merchants, all sell their goods for cost plus five, ten, or twenty per cent., which represents their profit. Universities sell theirs for twenty-five to fifty per cent. less than cost, which represents their actual loss in money. Hence, the $10,000,000 for the Medical Department of Harvard, the $7,000,000 for the Medical Department of Chicago, the $2,000,000 given to the Medical Department of Columbia University, the $7,000,000 for Johns Hopkins, the millions so freely given to McGill University. Universities and medical schools must have large endowments, either from generous friends or from the Government. The former have shown their interest in this university by large gifts. It now rests with the Government to help you either by annual grants or by additional endowments. I feel the more at liberty to urge this before a British audience, because Sir Norman Lockyer, as President of the British Association for the Advancement of Science, spoke in clarion tones but a few weeks ago in support of this same idea, and showed its urgent need in Great Britain. It is no less urgent in Canada. Liberal aid to universities and technical schools, including pre-eminently the medical schools, is one of the wisest

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and most profitable investments a Government can make, and will most surely meet with popular approval. The profits on the formerly wasted coal-tar products alone have more than repaid Germany all her vast grants to her chemical laboratories, in which the methods of utilizing this waste were discovered; and the pre-eminence of Germany in medical research has been maintained by similar expenditures upon her medical schools. Why should not the familiar label "Made in Germany" be replaced by "Made in Canada"?

Professor Wm. Clark, of Trinity University, then presented Dr. William Henry Welch, M.A., M.D., LL.D., Professor of Pathology in Johns Hopkins University, for the degree of LL.D.

Professor Welch then addressed the Convocation and spoke as follows:

No one could be insensible to an honor conferred by this University, and I certainly appreciate most highly the distinction and decoration conferred upon me to-day. I wish I were worthy of all that has been said of me. I am sure that my colleagues must wish that some non-medical man may present them also upon such an occasion—certainly a too partial judgment of my work and of my merits. But I do appreciate most highly the honor as coming especially from this Canadian University. We do not think of you as foreign. You are certainly the closest of kin to us, and the deepest of sympathy exists I am sure between us. There is certainly no line of nation or country drawn between the representatives of science and of letters. They represent one great brotherhood in the world. And we think of the members of the medical profession in Canada and of the representatives of science in this country as belonging to and forming part of us—we are all, as I say, one brotherhood. I may say that I can only re-echo the sentiments that Dr. Keen has so ably presented to you, and especially express my sympathy with his idea of the importance of the university hospital connected with the medical school. That has been our greatest strength in the Johns Hopkins University Medical Department. What we have been able to do for the advancement of medical education in this country has been due in very large measure to the fact that Johns Hopkins left a part of his large endowment for the support of a hospital, which is, as he says, in his will, to be a part of the Medical School. In that respect we have been most fortunate, and I say I think that, although the time must surely come, you will hardly reach the height of your endeavor here until that aid is secured and you have a hospital which is directly under your control. It has been a great gratification to me, as I am sure it has been to all of my colleagues, to have been present here on this most interesting occasion during these two days. I feel most

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amply rewarded by the inspiration which I have received by having come in contact with my colleagues here and members of the Faculty and others whom I have had the pleasure of meeting. I feel impressed greatly with the spirit which prevails here, and I feel the utmost confidence in the future of this institution. No one who understands the conditions here can help feel that, great as its work has been in the past, still greater is its work to be in the future.

The Vice-President of the University, Professor R. Ramsay Wright, then presented Professor William Osler, M.D., LL.D., F.R.S., Professor of Medicine in Johns Hopkins University.

Professor Osler then addressed the Convocation as follows:—

I need hardly tell you how much I appreciate the honor you have conferred upon me to-day here in the University in which I began my scientific education. I say, sir, it is with peculiar delight that I have been present at these exercises. It is really beyond words to express the feeling that an old student has when he sees at last this Faculty housed in such a building as that which was opened yesterday. It really is a great delight and the building is so fine, there is nothing, I think, on the continent to be compared with it for the purposes for which it has been destined.

Professor McPhedran then presented Russell Henry Chittenden, Ph.D., Professor of Physiological Chemistry in Yale University.

Professor Chittenden addressed the Convocation and spoke as follows:—

*Mr. President, Members of the Board of Trustees, Ladies and Gentlemen:*—I desire first of all to express my hearty appreciation of the honor which this University has seen fit to confer upon me. I am sure that I shall always hold with pride this distinction. I take it to be that this honor which has come to me to-day is probably in a large measure a recognition of physiological chemistry, as well as the science I represent. I take pleasure that it is so, because in my mind physiological chemistry as one of our biological sciences is destined to play a very important part in the development of the medicine of the future. In this science which is so, young, which has been in existence as a distinct science hardly a quarter of a century, I believe at least are the germs of many things which are destined to add health, strength, wealth and prosperity to the nations of the world. That, perhaps, may sound like a very broad statement, but in biology, the science of life, there is nothing more important than a study of the functions of the body; and in physiological chemistry we have a science which is striving most zealously to open up new avenues for the betterment of mankind.

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Matters of nutrition, upon which we all depend for our very existence; matters connected with the germs which medicine looked at now so attentively; matters of remedies—remedies when needed, exceedingly important. Every physiological action depends, we believe, upon chemical constitution, and the physiological chemist is striving with might and main to learn more about these matters for the benefit of human-kind.

It seems to me that this University of Toronto has an unparalleled opportunity for the development of this phase of physiological work. As stated yesterday, I viewed with great pleasure the new opportunities here presented for the study of physiological chemistry, and I believe that in this direction lies an opportunity for good, which, if followed up, will bring unbounded credit to this University; and just here let me say that if these opportunities are to come in physiological chemistry, in physiology and biology in general, there must be aid. It is not a question merely of money. Money is, of course, essential. We cannot have adequately fitted-up laboratories, we cannot have all the essentials for work unless there is money to provide these; but in addition there must be men, there must be brains at the disposal of the University, and the plea I would like to make here—and I trust it is quite an appropriate one to make here—is that facilities be offered for the carrying on of research work by young men who may be induced to stay here and cultivate these opportunities, through research fellowships and other methods.

That the strength of a university depends upon the strength of its men is a trite saying, but if a university is to grow we must provide young men—forceful men, men endowed with all the opportunities which the occasion demands—to take the place of the older men and push on the work and help to create an atmosphere which will redound to the credit of the University.

The plea I would like to make, therefore, is that every possible effort be made in the biological sciences to draw the young men here, and keep the young men who have started here at work along advanced lines, and to offer such inducements that other men will come to you here, and thus build up a school of active investigators and broaden the bounds of the science in which they are interested, and thereby increase the general usefulness of the University.

Professor A. B. Macallum then presented Charles S. Sherrington, M.A., M.D., F.R.S., Holt Professor of Physiology, University of Liverpool.

Professor Sherrington addressed the Convocation and spoke as follows:—

*Mr. President, Gentlemen, Members of the Board of Trustees*

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*of this University, Ladies and Gentlemen*:—It is a difficult thing to adequately express my appreciation of the distinction which your University so kindly has given me at the present moment. In fact, I do not feel able for the moment to express the feeling with which I regard the honor that I have just received.

I must say in defence of myself that some of the kind remarks that I have heard fall from the lips of Professor Macallum, make me imagine that he is thinking about somebody else, and that there is some mistake, but I consider myself fortunate, and the mistake is on the right side. The visit, through the occasion of this function, which has been so interesting to all of us, and which has brought me to Toronto, has, I can assure you, served as an encouragement and as a stimulus that I hope I shall to some extent adequately convey to my colleagues who are at work in the University of Liverpool.

Of course, I cannot yet more than suspect that in a large measure the honor that I have just received I owe to the benevolence of a time-honored institution here for the most infantine of universities. Our university, as it shelters at the present moment some of your graduates from Toronto, you may be interested to hear, is, I think, just one month old. It will be with a special pride and pleasure that my fellow-students and my fellow-members in that faculty will receive the news of the step that this university has taken. They, at that great distance, will, I know, appreciate having a small piece of Toronto University among them. I am only too proud to be that little piece of Toronto University over there, and I am encouraged because, from the words that Dr. Osler spoke, I begin to believe that I have entered upon an ornamental stage.

It may, perhaps, interest you, sir, if I report the fact that our university over there has as its Chancellor at the present moment one who is well known in the Dominion, a former Governor-General, Lord Stanley that was, Lord Derby that is.

I can only, in conclusion, hope that those finely built laboratories, at whose inauguration I have been present, will be but the forerunner of more, and I would take this opportunity of joining my own testimony with those that have been offered by Professor Keen, Professor Osler and others, as to the importance to the community of adequately supporting and adequately running what is and must be an expensive and not directly paying portion of the machinery of education. However, this is not the moment to dilate upon a theme with which I am afraid I have already wearied you.

In conclusion I would add that it will be one of the dearest privileges that I shall hold—to maintain, as far as a man can maintain, the honor, dignity and prestige of the University of Toronto.

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President Loudon presented by name, Henry Pickering Bowditch, M.A., M.D., D.Sc., LL D., Professor of Physiology in Harvard University, and the degree of LL.D. was conferred upon him *in absentia*.

Convocation then adjourned.

### THE DINNER.

On Friday night the Faculty of Medicine entertained their guests at dinner in the University Dining-Hall. Over one hundred sat down and among the guests present were: The Minister of Education, Professors Sherrington, Keen, Osler, Welch, Porter, McMurrich and Barker, Principal Hutton, Messrs. Alfred Moseley, B. E. Walker, J. Herbert Mason, Z. A. Lash, and others.

After proposing the health of the King, the President, who was in the chair, called upon the Minister of Education to propose the toast of the University; this the Honorable Mr. Harcourt did in a very happy manner, and response was made by Professor Irving H. Cameron.

The Vice-President then gave the toast of Our Guests, which was drunk with great enthusiasm.

Professor Osler, who replied first, referred especially to the great work which Professor Ramsay Wright had done for the cause of scientific Medical education in Ontario. He next recalled some amusing incidents occurring in his boyhood, in which the Architect of the New Buildings (Mr. Frank Darling) and Mr. Zeb. A. Lash, K.C., the chairman of the New Residence Committee, who were blushingly present, played a conspicuous part. He then congratulated the Faculty upon the public spirit manifested on both sides, in the amalgamation of the Medical Faculties of both Universities in advance of the completion of Federation, and predicted great things for the future, but strongly urged the necessity for proper Hospital accommodation and Clinical facilities, under the control of the Faculty, before the full measure of good could be accomplished. With one of his usual sallies, he left the room to catch the night train for Montreal, announcing on the way that he had prepared an excellent speech for the occasion, which Professor Keen would presently deliver—as his own.

Professor Keen, after expressing the pleasure he had in being present, and his appreciation of the hospitality extended to the visitors, spoke in commendation of what he had seen of the methods and means of instruction in the University, and joined with Professor Osler in urging the need and necessity of a University Hospital. He concluded an address which presented high flights of eloquence, with a stirring appeal for Anglo-Saxon unity in the moral and intellectual future of the world.

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Mr. Alfred Moseley, C.M.G., the generous and public-spirited Englishman who equipped and maintained an ambulance and nursing-staff in the South African War, and subsequently sent out a labor commission to the United States (which recently made a very valuable report) and who is now supporting a Commission of Enquiry into American Educational Methods, was then called upon. He gave a very interesting account of the impressions formed upon his mind in a two months' tour of Canada on the question of a Preferential Tariff, Free Trade within the Empire, and Mr. Chamberlain's position; and concluded a most lucid and instructive speech by bespeaking for the members of his Education Commission, who should visit Canada, a measure of the hospitality which he had himself enjoyed.

Professors Sherrington and Welch then returned thanks for the guests, and said many pleasant things about the University and their visit, Professor Welch remarking that he had now assisted at the opening of two of the University Buildings, and that he was quite prepared to come back to do similar duty for a third. His sponsorial duties are a pleasure to him and not a tax.

Mr. Byron E. Walker was called upon as a member of the Board of Trustees, and made a most important deliverance upon the finances of the University, and the duty of the Government and of private wealth thereto. He traced the development and expansion of the University, and showed how the original endowment had become insufficient for present needs, and how men of wealth would presently realize—as the process of education went on—that their duty and the Government's in educational matters was not vicarious and alternative, but supplemental and co-operative. He said the Government had, under pressure, always made good the deficits of the University, and he felt assured they would always do so; but he felt it was humiliating and beneath the dignity of a great Institution to be annually approaching the Government in *forma pauperis*, and that under the cramping influence of a perpetually recurring deficit, the best work was inhibited and lost. He made reference to the Ontario Surplus, and declared that it was a disgrace to any Government to have a surplus when the University—the creation and child of the State—was crying for bread and stunted in its growth by penury. Mr. Walker then dilated upon the effect of the senseless bugaboo of "direct taxation" upon both Government and people, and pointed out how successfully and well the system worked in Michigan, where the people cheerfully and willingly paid a fraction of a mill upon the dollar for the support of education. He advocated its adoption in Ontario.

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Mr. Z. A. Lash afforded much entertainment by his inimitable recitation of "Johnnie's First Moose" by Dr. Drummond.

The Nestor of the Faculty and of the Professors, Dr. James H. Richardson, sole survivor of the Faculty of 1853, was then called upon and gave an account of the first Faculty and of its dissolution. He referred very pathetically to the history of the early days, and concluded his interesting reminiscences by thanking God that he had lived to see not only the restoration of the Medical Faculty and the good work it had accomplished in the last seventeen years, but also the final triumph of the unification of Medical teaching in the University.

With the singing of "Auld Lang Syne," a most pleasing and enjoyable gathering was dissolved, and the commemoration exercises ended.

## PROGRESS OF TORONTO UNIVERSITY.

There could not have been a more auspicious beginning for the new era of things in the Uuniversity than the ceremonies connected with the formal opening of the new medical laboratories. The occasion marked the first step in the federation of Trinity University with the Provincial University, for the two medical institutions consolidated are the medical faculties of those universities, and this alone would have made the inaugural functions of more than ordinary interest, even to the non-medical portion of the public. The presence also of such distinguished teachers as Professors Welch, Osler, Sherrington, Chittenden, Keen and others, was in itself sufficient to make the opening function a memorable one. Further, the whole programme of the ceremonies was carried out without a single interruption. The university authorities are to be congratulated on this result, as well as on the cordial co-operation of the members of the two faculties which have chosen to throw their lot together.

The texts of the various addresses show how far-reaching are the questions of medical education, and how pressing is the necessity of a solution of many of them. Professor Sherrington's very able address was in the main devoted to the needs of medicine as a science, and to the difficulty under existing conditions of satisfying these needs. It is everywhere the case that the great expansion which has taken place in the sciences has taxed to the utmost the resources of the universities, and the demands of the medical sciences in this respect are amongst the most urgent. Adequately constructed laboratories and their maintenance are costly affairs, which cannot be managed as one manages a dividend-paying enterprise. If it were so, then only the wealthy few could afford to enter the profession of medicine. From the point of view only of imparting the

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instruction required the difficulty is great, but it is more formidable when all the conditions of efficiency in teaching must be met. Research is an absolutely necessary feature in modern medical teaching as in some other departments of higher instruction. This is very clearly put by Professor Sherrington. "The duties of a university do not begin and end with the disciplinary and didactic. Besides schools of instruction, they must be schools of thought. To be this latter, the laboratory must pursue research. Even for the welfare of the class-teaching this is essential. Instructive lectures may be given by men of ability, the whole of whose knowledge is second-hand, but it is doubtful whether the real life of science can be fully met and communicated by one who has not himself learnt by direct enquiry from nature. Nothing so augments the teacher's power of impression and incisive teaching of a subject as to have faced problems in it himself as an original enquirer. And after rudiments have been once fairly acquired, there is for good students no training equal to that given by following even a small research under an experienced leader."

Research, however, is not the least costly factor in the university problem, and the question is, how to provide for it. In the new University of Liverpool, which aims at being an institution for research, the situation was met by the people of Liverpool imposing a penny on the pound rates, which would mean a direct contribution by the people themselves of about £18,000. From this it is evident that sections of the English public are keenly alive to the value of research in their universities. Amongst ourselves the doctrine that research be carried on in the University does not appear to have acquired the influence that it should have, but certain departments of the Provincial institution have not failed in their duty in this respect. Extremely valuable work has, for instance, been done in the physical, chemical, biological and physiological laboratories, work which has made the University known throughout the world as a progressive seat of learning, and there is good reason for the hope that research will play an ever-increasing part in university life and work. Those who are advocates of research must, however, not neglect to educate the public as to the value of research, for the ultimate support of scientific investigation must be derived from the people of this province. The university teachers must now and then leave their laboratories to show the public, as Professors Welch, Sherrington Osler and Chittenden have done in their inaugural addresses last week, that research is the life of a true university, and that it is the mainspring of all progress and intellectual and material welfare in a nation, and if they fully do their duty in this line, adequate financial support will not in the end be lacking.—*The News.*

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# Personals.

Dr. John Hunter, of Toronto, left for New York for post graduate work, October 24th.

Dr. Brefney O'Reilly passed in Gynecology and Midwifery for the conjoined London examination.

Dr. H. B. Anderson returned from his sojourn in North Muskoka much improved in health.

Dr. Harold Parsons spent a week in Baltimore, early in October, looking for pointers in connection with the teaching of clinical microscopy.

Congratulations to our friend Doctor Lewellys Franklin Barker who was married to Miss Lilian Haines Halsey, of Baltimore, on the twenty-ninth of October.

Dr. H. S. Hutchinson (Tor. '01), who was lately in charge of the new Sanitarium, Gravenhurst, has returned to Toronto and is engaged at work in the new laboratories.

We are pleased to announce that Dr. Charles D. Parfitt has quite recovered, and extend congratulations on his marriage to Miss Fitz-Randolph of Plainfield, New Jersey, October 31st.

Dr. Macdougall King (Tor. '02), has commenced practice in Denver, Colorado, and has also been appointed Instructor in Physiology in the Medical Faculty of the University of Denver.

Dr. V. E. Henderson, B.A. (Tor. '02), is now engaged in post graduate work in Prague. We hope to publish in our next issue a paper from him on "Hay-fever: Oteology an Specific Treatment."

Regular students registered for the session of 1903-4:

| | |
|---|---|
| First year | 155 |
| Second year | 135 |
| Third year | 164 |
| Fourth year | 161 |
| Total | 615 |
| Occasional students | 91 |
| Grand total | 706 |

The occasional students are from the Ontario Dental College, and receive instruction in Anatomy in the University. In addition there are a few fifth year students, working chiefly in the laboratories. The fifth year course is being organized.

The numbers are smaller in the primary than in the final years on account of the recent establishment of a combined six years' course in Arts and Medicine. A number entered for this course in 1902 and 1903. Those who did so in 1902 will be enrolled in the first year—Medicine, next session.



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Dr. J. M. Lefevre, of Vancouver, B.C., passed through Toronto on his way to England in the latter part of September.

Dr. R. A. Reeve, Dean, had a serious attack of influenza at the time of the opening exercises. He went up to the gymnasium on the evening of October 1st with a temperature of 104, and while delivering his interesting address was obliged to cling to the lectern for support. After this he was confined to his bed for about ten days. He left Toronto for Preston Springs and came back in a couple of weeks in perfect health much to the delight of his friends, in time to entertain the medical students at a smoking concert on Hallow-e'en.

# Miscellaneous.

**The Treatment of Symptoms.**

In a highly interesting article on this subject, Walter M. Fleming, A.M., M.D., of New York City, uses the following language: "Long experience in the treatment of diseases in their incipiency, evidences beyond all debate, that almost invariably, the attack in a large proportion of cases is inaugurated by febrile symptoms of greater or lesser severity. Also, it may be noticed that constipation or torpid inactivity of the bowels prevails. Therefore, the first indication in the incubation or incipiency of the attack, of almost any form or nature, is primarily to allay the fever, pain-nervousness and solicitude of the patient, and secondarily to empty the alimentary canal. These two ends being accomplished, a long advance towards a possible abortive issue of the attack has been made, or in any event, the first indication and requirements are fulfilled, in proper progress toward a cure.

Thus in the primary treatment of the numerous ills, which are characterized by the above quoted symptoms, the physician will find Laxative Antikamnia and Quinine Tablets at once handy, convenient and reliable, safe and sure, and to which the turbulent symptoms of fever, constipation, pain-sleeplessness, nausea and generally wretched depression yield so promptly and gracefully, that it is certainly refreshing to the physician himself, to note the change in his patient, from suffering and solicitude to comfort and quiet. I certainly know of no other remedy which will so readily and decisively allay and control the symptoms above enumerated."

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---

"Expectation becomes realization in all cases of localized inflammation where Antiphlogistine is applied."

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**Sanmetto in Prostatitis, Urethritis, Cystitis.**

I have used Sanmetto extensively in my practice for some years, and in well chosen cases have always gotten good results. I look upon it as a most valuable remedy in prostatitis, urethritis, cystitis, and in fact all inflammatory conditions of the genito-urinary tract.

Jackson, Mich. W. J. CHITTOCK, M.D.

---

J. Wm. Henry, M.D., Brooklyn, N.Y., states: "Aside from the ordinary value of Glyco-Thymoline in its use on abnormal mucous membrane, I consider it of extreme value in the treatment of diphtheria. In a recent case of the most severe type, in which every symptom pointed to a discouraging prognosis, I used Glyco-Thymoline by spray and swab with the ordinary constitutional treatment. The temperature soon lowered and the crisis was passed without serious trouble, much to my surprise and gratification.

In tonsillitis it has been my standard treatment for some time. Its action is quick, and the effect was very agreeable to the patient."

---

"Extension of the septic products along the vascular highways is prevented by the use of Antiphlogistine."

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During the last two years I have constantly and extensively employed Pepto-Mangan (Gude) in my practice. and cannot sufficiently praise its curative action in diseases of the nervous system and digestive organs.

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---

"The abstraction of blood from the deep blood-vessels into the superficial capillaries through physiologic innervation is physiological phlebotomy. Bleed, but save the blood, is the mechanics of Antiphlogistine."

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body, enter the plasma and are taken up by the molecules of hemoglobin? All these questions have been discussed and rediscussed, but as yet, as Hammarsten[1] says: "The action of the iron salts is obscure."

In a clinical article we are not called upon to go into details in discussing the various phases of the question as to the absorption and mode of action of the iron salts, but a few words may be said to show the present status of the subject.

Whether iron compounds of the inorganic group are absorbed at all, is a question of subsidiary interest in the present inquiry. There are two diametrically opposite views on this question. Bunge and his pupils[2] say that inorganic iron salts are not absorbed in any amount, however small, and that Blaud's pills and similar preparations act only by combining with the hydrogen sulphide and the alkaline sulphides of the intestine, thus preventing the decomposition of the organic compounds of iron existing in our food, especially in vegetables, and so permitting the absorption of these compounds into the blood. The opposite view is held by Quincke[3] and others, but the balance of evidence is in favor of Bunge's hypothesis.[4] The well-known fact that enormous doses of iron are required to produce appreciable effects in chlorosis supports this theory. Thus, if a woman takes six grains of reduced iron three times a day (eighteen grains daily), it will take weeks to restore her to the normal condition if her hemoglobin has fallen to fifty per cent. And yet, the entire amount of iron in the blood of a normal woman of average weight is only thirty grains, so that if the inorganic iron were absorbed, as some observers claim, a few days would suffice to restore the balance of hemoglobin and red cells.

On the other hand, organic iron compounds, especially such as are composed of iron with a proteid substance that resembles as closely as possible the proteids of the food as they occur in the intestine (*e.g.*, peptones), are undoubtedly absorbed into the blood in sufficient amounts to produce a comparatively speedy therapeutic effect in anemia, without injuring, as the inorganic compounds often do, the epithelial covering of the stomach and intestine, and thus causing gastro-intestinal symptoms summarized under the two general headings of dyspepsia and constipation.

It is these advantages that led to the general adoption of the peptonates, albuminates, etc., as the remedies to be preferred in the treatment of anemia. In this report we deal with one of these preparations, that known as pepto-mangan, Gude, in which iron and manganese exist in the form of peptonates. Gude's pepto-mangan has been used for a long time at the Columbus Hospital as a matter of routine in all anemic

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patients during convalescence from prolonged illness or from operations. The satisfactory results which have been obtained with this preparation have been noted, in a general way, by the visiting staff as well as by the house physicians, but until now we had made no study of the exact results, as attested by the examination of the blood before and after the initiation of the treatment.

In order to determine more accurately what could be expected of pepto-mangan in secondary anemias as they occur in a general hospital, we studied a number of cases in the medical, surgical and gynecological wards. Of these a majority were in the services of Drs. Ramon Guiteras and Egbert H. Grandin, visiting surgeon and visiting gynecologist to the hospital, and take this opportunity to acknowledge their courtesy in permitting us to pursue this work.

About forty cases were studied from October 1, 1902, to March 1, 1903, in as thorough a manner as possible, with a view of determining the action of the preparation to be tested. Unfortunately, for reasons beyond our control, a great many of these patients left the hospital, believing themselves sufficiently improved, without giving us time to try the remedy for a sufficient period to obtain definite results. We present, however, twelve cases in which the medication was continued for three or more weeks, usually for about a month in each instance. In each of these cases blood-counts were made before beginning the treatment, as well as after it had been discontinued. The cases are given below, simply as they appeared in our notes, and they were not selected particularly on account of the results noted, but merely because they were the cases studied more completely than the rest.

## Report of Cases.

Case 1.—Mrs. R. F., Italian, 42 years of age, was admitted to the hospital on December 4th. Diagnosis, ovarian cyst. Symptoms of secondary anemia. She was operated upon December 5th and the uterus was removed through the abdominal incision, as it was found to be the seat of a fibroid tumor which had degenerated into sarcoma. She was discharged cured on January 10, 1903. During her convalescence she took one tablespoonful of pepto-mangan (Gude) three times daily. The examination of the blood showed the following findings:

December 4, hemoglobin 50 per cent., reds 3,350,000, whites 15,000. December 18, after hysterectomy, hemoglobin 39 per cent., reds 2,300,000, whites 16,000. January 10, hemoglobin 70 per cent., reds 4,250,000, whites 7,800.

The patient left the hospital in an excellent condition showing no signs of anemia or debility.

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CASE 2.—A.P., Italian, 25 years old, admitted November 17th, with stricture of the urethra and signs of marked anemia. November 24th, perineal section and internal urethrotomy for stricture. There was considerable hemorrhage during and for a few days after the operation.

Examination of blood: December 12, eighteen days after operation, hemoglobin 68 per cent., reds 3,700,000, whites 10,429. January 4th, 1903, twenty-eight days after beginning the use of pepto-mangan, hemoglobin 95 per cent., reds 4,800,000, whites 8,400.

Pepto-mangan was given in doses of one tablespoonful three times daily from December 13th to January 10th. The patient was discharged cured on January 10th, in good general condition.

CASE 3.—M.S., Italian, 25 years old, admitted October 14th. The diagnosis was perinephritic abscess and tuberculous knee-joint, and the patient showed pallor of the skin and mucous membranes. He was operated upon by lumbar incision for perinephritic abscess on October 24th, and his knee-joint was excised December 18th.

Examination of blood: December 13th, 1902, three weeks after first operation, hemoglobin 70 per cent., reds 3,104,000, whites 5,888. December 20th, 1902, two days after excision of joint, hemoglobin 70 per cent., reds 2,751,000, whites 24,000. January 10th, when discharged, hemoglobin 85 per cent., reds 4,640,000, whites 5,150.

This patient was given pepto-mangan for three weeks from December 21st to January 10th. He was discharged improved in good health. The anemia was very marked on December 20th after the second operation, and the increase in the blood cells and hemoglobin was very satisfactory for a case of this severity after three weeks' treatment.

CASE 4.—Ida M., five years old, Italian parents, born in the United States, was admitted November 30th, 1902, suffering from typhoid fever. December 12th, after the convalescence had set in, the child was extremely anemic-looking, with pale skin and pale, bluish-red mucous membranes. Pepto-mangan was ordered, a teaspoonful three times daily, on December 12th. Eight days later the first blood examination was made; two weeks later, the second. The findings of the pathologist were as follows:

December 20th, hemoglobin 75 per cent., reds 4,750,000, whites 30,000. January 8th, hemoglobin 85 per cent., reds 4,960,000, whites 9,200. The patient was discharged cured on January 8th.

CASE 5.—Cesare C., aged 25 years, single. Had been operated upon one year ago in South America for vesical calculus and

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urethral stricture. Was admitted December 3rd, 1902, complaining of inability to urinate and continuous dribbling of urine through a suprapubic fistula. December 13th, perineal section without a guide and internal urethrotomy were performed. The patient was weak and anemic after the operation, so pepto-mangan, a tablespoonful three times daily, was prescribed on February 5th, 1903. He made a good recovery from the perineal operation, but the suprapubic fistula persisted. After twenty-two days' treatment with pepto-mangan he was discharged improved.

Examination of blood: February 6th, 1903, hemoglobin 80 per cent., reds 3,878,000, whites 4,250. February 28th, 1903, hemoglobin 85 per cent., reds 3,516,000, whites 4,600.

CASE 6.—M.C., aged 44 years, widower, has had urethritis four times. On admission he gave a history of having suffered from frequent and painful micturition for fifteen months. An examination showed a chronic urethral discharge, a urethral stricture, 12 F. at about 6½ inches from the meatus, and a tumor in the right umbilical region simulating a very large kidney. The prostate was much enlarged and very tender. The urine was of a specific gravity of 1,020, acid in reaction, contained no sugar and no albumen, but numerous pus cells. In addition to treatment by irrigations and by dilatation of his stricture, he received pepto-mangan, a tablespoonful three times daily, from February 4th to February 28th, to combat a marked anemia.

Examination of the blood: February 5th, hemoglobin 45 per cent., reds 2,149,000, whites 9,760. February 28th, hemoglobin 55 per cent., reds 2,460,000, whites 6,890.

The patient improved as regards his urinary symptoms, but his anemia did not show much amelioration after twenty-three days of iron therapy. At the time of writing he was to be prepared for a second operation, an exploratory nephrotomy for his renal tumor.

CASE 7.—A.B., Italian, aged 58 years, married, was admitted to the hospital on November 24th, 1902, complaining of symptoms of enlarged prostate which had been giving trouble for six months. He had lost considerable flesh and strength and looked very anemic. He was operated upon December 27th. His convalescence progressed satisfactorily as regards his urinary symptoms, but the anemia persisted, and on January 14th he was put on a tablespoonful of pepto-mangan three times daily. After twenty-five days of this treatment he was discharged somewhat improved as regards the anemia. The report of the two blood examinations before and after the use of pepto-mangan was as follows:

January 15th, 1903, hemoglobin 55 per cent., reds 2,940,000,

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whites 8,300. February 9th, 1903, hemoglobin 65 per cent., reds 3,110,000, whites 8,100.

CASE 8.—A.D., eight years old, school-girl, on admission to the hospital, September 22nd, 1902, complained chiefly of abdominal pain, general weakness, and enlargement of the abdomen. On September 24th the abdomen was opened, and the peritoneal cavity found to contain a large number of tuberculous foci on the peritoneum and a considerable amount of serous fluid. The diagnosis of tuberculous peritonitis was made.

On January 27th, 1903, the abdomen was again found full of fluid, and was opened for the second time. On January 28th the patient was given pepto-mangan, two teaspoonfuls three times daily, for twenty-nine days, at the end of which time she was discharged. The anemia had not improved. The reports of the blood examinations were as follows:

January 29th, 1903, hemoglobin 75 per cent. reds 3,920,000, whites 10,000. February 27th, 1903, hemoglobin 75 per cent., reds 3,890,000, whites 7,200.

CASE 9.—G.P., Italian, 28 years old, was admitted to the hospital on January 13th, 1903. For the last four months he had noticed a swelling on the left testicle. He had his scrotum tapped ten days before admission, and about five ounces of a clear fluid had been withdrawn. An examination showed a pyriform swelling about eight times larger than the normal testicle, with an apex above the external ring. Its upper part was hard, without fluctation, dull on percussion, no impulse on coughing and non-translucent. Its lower part fluctuated and was translucent. On January 19th, 1903, the testicle was removed, the diagnosis of sarcoma of the testis being afterwards confirmed by microscopical examination. On February 1st the patient was given pepto-mangan in doses of a tablespoonful three times daily, and this medication was continued until February 28th, when he was discharged with a well healed wound and improvement of anemia. The reports of the blood examinations were as follows:

February 5th, 1903, hemoglobin 65 per cent., reds 2,362,000, whites 5,900. February 28th, 1903, hemoglobin 70 per cent., reds 3,800,000, whites 7,000.

CASE 10.—L.M., born in the United States, aged 25 years, was admitted to the hospital January 3rd, 1903. She had been married four years, had had one child and one miscarriage. No venereal history. One month before admission she was exposed to cold during menstruation, and the flow ceased. One week before admission she began to flow steadily and still continued to do so, on her entrance to the hospital. She has had severe pelvic pains for three weeks. The uterus was found

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retroflexed, and a large doughy mass was found on the left side posteriorly. On January 9th, 1903, she was operated upon by posterior vaginal section. A suppurating hematocele originating from a ruptured extrauterine pregnancy was found in the left broad ligament. She was given pepto-mangan in doses of a tablespoonful, three times daily, from January 10th, 1903, to February 9th, 1903. The patient was discharged cured on February 9th. The reports of the blood examinations were as follows:

January 24th, hemoglobin 65 per cent., reds 3,150,000, whites 9,200. February 9th, hemoglobin 75 per cent., reds 4,318,000, whites 6,100.

CASE 11.—Mrs. L.G., Italian, 23 years of age, married six years, III para, last child three years ago. Admitted January 15th, 1903, on the recommendation of her family physician, who had made the diagnosis of ovarian cyst. On admission a careful examination was made and she was found to be pregnant in the eighth month. The woman was delivered in the hospital on February 12th, 1903, the labor being normal, but accompanied with considerable hemorrhage, leaving the patient markedly anemic, as she had been previously suffering from anemia during her pregnancy. Pepto-mangan was given her in doses of a tablespoonful three times daily from January 25th to February 28th, when she was discharged cured. The reports of the blood examinations were as follows:

January 29th, hemoglobin 55 per cent., reds 3,126,000 whites 8,450. February 28th, hemoglobin 75 per cent., red, 4,390,000, whites 6,000.

Case 12. G.G., Italian, 44 years, single, was admitted to the hospital on November 26th, 1602. He is accustomed to smoke a pipe. For the past fourteen months he has had a sore on his lower lip, which gradually grew larger. At times it gave rise to a great deal of pain. On examination, a small growth was found in the median line of the lower lip, hard in consistence, ulcerating, and with slight infiltration of the surrounding tissues. The sublingual and cervical glands were not enlarged. The growth was removed by a V-shaped incision on December 10, 1902. A moderate degree anemia remained after the operation, and on February 6, 1903, the patient was given pepto-mangan, in doses of a tablespoonful three times daily. This medication was continued until March 5, 1903, when the patient was discharged cured. The microscopical examination of the growth showed it to be an epithelioma. The reports of the blood examinations, were as follows:

February 6, 1903, hemoglobin 70 per cent., reds 3,219,000, whites 8,318. March 5, 1003, hemoglobin 85 per cent., reds 4,890,000, whites 7,000.

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## SYNOPSIS OF THE CASES.

| No. | Name | Age | Sex | DIAGNOSIS | FIRST BLOOD COUNTS | | | LAST BLOOD COUNTS | | | Results as regards Anæmia |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Hem. | Whites | Reds | Hem. | Whites | Reds | |
| I | R. F. | 42 | F. | Fibroid of uterus degener. into Sarcoma (Oper.) | 50% | 15 000 | 2,530,000 | 70% | 7,800 | 4,250,000 | Markedly Improved |
| II | A. P. | 25 | M. | Stricture of the urethra. (Oper.) | 68% | 10,429 | 3,700,000 | 95% | 8,400 | 4,800,000 | Cured |
| III | M. S. | 25 | M. | Perinephritic abscess. (Oper.) Tuberculous knee. (Oper.) | 70% | 5,888 | 3,104,000 | 85% | 5,150 | 4,640,000 | Improved |
| IV | I. M. | 5 | F. | Typhoid fever | 75% | 30,000 | 4,720,000 | 85% | 9,200 | 4,980,000 | Markedly Imp. |
| V | C. C. | 25 | M. | Suprapubic operation for vesical calculus Urethral stricture (Oper.) | 80% | 4,250 | 3,878,000 | 85% | 4,600 | 4,516,000 | Improved |
| VI | M. C. | 44 | M. | Renal tumor Urethral stricture | 45% | 9,760 | 2,149,000 | 55% | 6,890 | 2,460,000 | Slightly Improved |
| VII | A. B | 58 | M. | Hypertrophied prostate (Oper.) | 55% | 8,300 | 2,940,000 | 65% | 8,100 | 3,110,000 | Improved |
| VIII | A. D. | 8 | F. | Tuberculous peritonitis (Oper.) | 75% | 10,000 | 3,920,000 | 65% | 7,200 | 3,890,000 | Not Improved |
| IX | G. P. | 28 | M. | Sarcoma of testis (Oper.) | 65% | 5,900 | 2,362,000 | 70% | 7,000 | 3,800,000 | Improved |
| X | L. M. | 25 | F. | Suppurating Hematocele (Oper.) | 65% | 9,200 | 3,150,000 | 75% | 6,100 | 4,318,000 | Improved |
| XI | L. G. | 23 | F. | Pregnancy and labor | 55% | 8,450 | 3,126,000 | 75% | 6,000 | 4,390,000 | Improved |
| XII | G. G. | 44 | M. | Epithelioma of the hip (Oper.) | 70% | 8,318 | 3,219,000 | 85% | 7,000 | 4,890,000 | Improved |

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# The Canadian Practitioner and Review.

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## Original Communications.

### PRESIDENT'S ADDRESS.

BY J. T. FOTHERINGHAM, M.D., TORONTO.

*Fellows of the Clinical Society and Gentlemen*—I am reminded by my present situation of the dictum that the main element in a man's success is a reasonably adequate apprehension of his own limitations, and reflection upon this topic confirms me in the opinion that I ought not to be here in the president's chair. However, the kindness and good will shown towards me by your action in electing me to this office last spring merits at least the courtesy of an acknowledgment of the high honor you have paid me, and an undertaking from me to do my best to justify your confidence and repay your kindness, by earnest efforts to make this year's meetings of the Society, at least as useful to the Fellows as they have been in past years, under the guiding hands of many who were my teachers in the Art and Science to which we have devoted ourselves.

Before these men I feel, without my being able to prevent it, the diffidence that in scholastic and professional circles should always temper the attitude of juniors to seniors. As I said on the occasion of my election, I feel that the Accolade of Medical Knighthood has been unexpectedly laid upon my shoulders, or as a lieutenant might feel if suddenly, without the eliminating action of the casualty list, made commanding officer of his unit.

If I may be allowed to outline briefly the probable course of events for the winter, I should begin by most heartily congratulating the Society upon the federation of the Medical Faculties of the two universities. This consummation of the long cherished wishes of so many of us, I think you will all agree, removes what has been in a sense an embargo upon our activities, even within the Society, as well as outside of it. It may be that our course of action upon certain occasions has been modified heretofore by this line of cleavage, and I may venture to make the forecast that without indecent haste or



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inconsiderate handling of the old associations and, if you like, prejudices of any member of the Society, we may soon be able now to centralize our activities, perhaps change our place of meeting, abandon what has sometimes been in past years a sort of armed truce, place ourselves more *en rapport* with the Medical Library, with the new home of the conjoint Medical Faculties, and all the stimulating and multifarious activities of a great educational centre. The harmony of the past can be now made even more complete, and our work of mutual instruction and entertainment will be, I am sure, more profitable and pleasurable than ever before.

I venture, with this introductory digression, to remind the Fellows of the restriction imposed upon our work and discussions here, by the name of the Society and its constitution, particularly Art. 2, which reads: "The object of this Society shall be reading clinical papers and discussions thereon, exhibition of patients when possible, and all matters pertaining to clinical work."

I should like, also, to remind ourselves that many branches of medical knowledge have become purely clinical which fifteen or twenty years ago could not have been admitted to a medical discussion at all. For instance, one can no longer discuss chorea or malaria without the admission of certain laboratory methods of diagnosis and etiology as providing explanation of symptoms or rationale for treatment. So that our discussions may fairly, I think, be allowed to range pretty widely.

I hope to make the presentation of Cases a more frequent feature of the programme. This should not be difficult, with so large a number of hospital patients available.

The balance, too, between Medicine and Surgery on the programmes may be, perhaps, held a little more true than has sometimes been the case in the past.

And finally, I need not remind you that your president and committee feel that their best efforts in providing good programmes will be useless without the hearty co-operation which we confidently expect from yourselves.

The selection of a subject upon which to address you has cost me much thought. On occasions like this, one of three courses is usual and proper. First, to seek to bring forward some new and useful contribution to the sum total of medical knowledge, based upon original investigation, observation and statistics. This I felt to be quite beyond my power. Second, to indulge in bare-faced compilation, and this method of scissors and paste, I felt to be too uncomplimentary to this Society. The third alternative, if one may use the term, seemed to be to select some purely general topic, and handle it on very wide lines, with such literary skill and success as one may, to make it as little tedious as possible to the hearers.

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Acting upon this idea I should like to say a few words upon functional nervous diseases. I need not define the term to this audience, but would remind you that the list of these diseases was a few years ago much longer than it is now. Chorea, for instance, and general paralysis of the insane, have a fairly well-determined pathology of their own, so with locomotor ataxy for many years past, some of the tics, Raynaud's disease, and even exophthalmic goitre. If one were to substitute for functional disease the term, "nervous disease without known anatomical basis," one would be more accurate, and the grouping made by Church and Peterson will, perhaps, stand quotation here:

1. Trophoneuroses, of which exophthalmic goitre, Raynaud's disease, acromegaly, scleroderma and angioneurotic œdema are common examples.

2. Infection neuroses (usually with marked motor disturbances), such as tetany, tetanus, chorea and rabies.

3. Motor neuroses, such as Huntingdon's chorea and Thomsen's disease.

4. Fatigue neuroses, such as writer's cramp.

5. Psychoneuroses, such as hysteria, neurasthenia, epilepsy, migraine, and some of the tics, not the true tic of the fifth nerve, but such as are accompanied by echolalia, coprolalia, etc.

6. Traumatic neuroses, either of hysterical or neurasthenic type.

Of all this imposing list, the typical functional forms are neurasthenia and hysteria, and it may be of use to collate their symptoms for the purpose of distinction. It is interesting to note the disappearance of the old term hypochondriasis, the cases formerly grouped under this head being now distributed between neurasthenia with marked melancholic tendency and true incipient melancholia or other form of insanity.

A few important points of difference may be stated as follows: Hysteria is essentially paroxysmal, not that in this country the true hysterical "fit" is very common, but that seizures of some kind occur frequently, and in the interval the patient is for her normal, not introspective, fond of amusement, flighty and unsteady from the psychical point of view, grave and gay by turns with little or no cause, with no stability of will or marked force of character, but none of the mental exhaustion, chronic inability to concentrate thought, irritable temper, and usually introspective mildly or acutely melancholic turn of mind of the neurasthenic. The old phrase, "irritable weakness," has not, I think, been improved upon in seeking to define the condition of the neurasthenic. It is a familiar physiological fact that nervous debility and exhaustion mean increased irritability of nerve tissue, *i.e.*, a readiness to respond too readily and violently to less than normal stimuli, and so we find Osler saying that

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the first change is one in which "strain becomes excessive and is manifested as worry. The individual loses the distinction between essentials and non-essentials, trifles cause annoyance, and the whole organism reacts with unnecessary readiness to slight stimuli."

This change comes on usually as a result of over use of function, whether of the brain, stomach, or sexual apparatus, in an individual previously of a type of mind quite the opposite of the above described. He has, perhaps, been a man of great natural force and large mental endowment, but extravagant in his use of his nervous capital, wasting it in large affairs and refusing to listen to Nature's warnings till her Nemesis overtakes him, and the Furies busy themselves as did Prometheus' vulture of old, not always on his liver as they did in the myth, but on some of the viscera or organs, to which the victim attributes all his woes, with the vexing persistency and profusion so familiar to all physicians.

Vice, from the physician's point of view, has been recently very neatly defined as "a voluntary neglect or abuse of normal functions," a definition which upon analysis will be found, I fancy, to cover the ethical as well as the medical needs of the term. The same writer has said also that "Vices, then, are acts and habits which depreciate the organism as a working machine." Particularly is this seen to be the case when we consider the two different kinds of value attaching to the normal discharge of function. These have been defined as the nutritive and dynamical; nutritive value as when one feeds the blood by proper eating, or by walking abroad, exercises his muscles; the other, when by the same proper eating one "gladdens the heart," as in Scripture, or when by the same walking, or better riding, abroad, a noble prospect, like the Thames from Richmond Terrace, stirs the imagination. The former, the nutritive, has as its vehicle the *blood system*, and the latter, or dynamical value, has as its chief vehicle the *nervous system*, particularly the higher elements in the brain, but reflexly the lower automatic or vegetative mechanism as well. One thinks here of the distinction now-a-days being made by psychologists, between the objective mind, and the subjective, the latter controlling the functions and sensations of the body, usually subconsciously, and being amenable to control, for good or evil, by power of suggestion.

To resume the differential diagnosis of hysteria and neurasthenia, in addition to these physical and mental differences, one notices that, as regards *sex*, the neurasthenic is as often male as female, while hysterical patients are nearly all female.

As regards *age*, neurasthenia may occur at any age, but young male adults are somewhat predisposed, while hysterical manifestations are seen, if they occur at all, always before the

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age of thirty, probably from the hereditary element in their causation, combined with the psychical instability and state of flux accompanying puberty and adolescence with their early essays at the solution of life's problems and experiences.

As regards *cause*, hysteria is due to diathesis with an emotional upset or shock as the determining cause of its active manifestations, while neurasthenia, though constitutional tendency cannot be ignored, is of chronic production due to prolonged abuse of function, such as dyspepsia or overwork. This does not preclude our admitting the existence of traumatic and therefore usually sudden or acute neurasthenia. I have now in the General Hospital a strong, healthy farmer of thirty-five who has never been a week in bed in his life, and with family history unexceptionable, who is markedly neurasthenic and whose symptoms all began one week after a team of young horses had ran away with him, doing little or no damage to person or property, but rolling him out of the sleigh without even bruising him.

As regards *onset* and *course*, hysteria is essentially a paroxysmal though non-periodic disorder, variation from day to day, or even from hour to hour, being typical, while neurasthenia usually starts gradually and runs an even, persistent, so to speak uneventful, course of moderate duration. As to termination, the hysterical individual can no more change her natural disposition than the leopard his spots, though, of course, training and discipline and improved general health can and do control active manifestations. The neurasthenic, on the other hand, after several weeks or months of ill health, usually recovers by rest his lost nervous capital and becomes as capable a man of work as ever, though not free from the danger of recurrence if similar causes are allowed to persist.

As regards *general symptoms*, one notes in hysteria the tendency to convulsive motor disturbance already referred to, the increased reflexes, the borborygmi, globus, and other spasms of involuntary muscles, the hemianesthesias, hyperesthesias, or paresthesias, usually segmentally distributed or found in mammary or ovarian areas, the contraction of visual fields, and the almost endless list of counterfeit subjective symptoms so easily recognized as a rule by the observer of experience, who can exclude organic cause for the symptoms he sees. In neurasthenia, on the other hand, a totally different picture is seen. Vasomotor, rather than muscular disturbances, predominate, such as vertigo, syncope or flushing, the *casque neurasthenique*, the occipital and spinal aches, the combination of debility and exhaustion, restlessness, sleeplessness; incapacity for sustained activity of either mind or body; an endless variety of paresthesiae, both of viscera and of skin, of vasomotor or sympathetic origin; a persistent upset of the emotional equilibrium, always

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in the direction of fear or sadness, and sometimes a claustrophobia or agoraphobia so marked as to put the sufferer really over the border into the class of the insane; the wide open paralytic pupil, the furtive, apprehensive manner and facial expression. But I must not weary you with further elaboration of the distressing picture, only point out finally that, as Savile has it, "Hysterical disorders are not so much those of exhaustion as of active perversion of the functions, such as localized paralyses, anesthesiae, etc." Anesthesia, especially segmental, or hemianesthesia, while very common in hysteria, is extremely rare in neurasthenia, though hyperesthesia is common enough in both, and, while in hysteria, emotional disturbance and mental exaltation predominate, in neurasthenia intellectual weakness is usually first to attract attention, and persists as a prominent feature of the case.

One of the most serious aspects of neurasthenia, and one of which I believe that the profession at large is not sufficiently aware, is its tendency towards insanity. I am sure that in emphasizing this point I shall be supported by all who have had much experience with this disease.

I shall close my fragmentary account of the protean symptoms of these two diseases by reminding you of their not infrequent co-existence in the same patient, a condition that often taxes one's diagnostic and more especially one's therapeutic skill and ingenuity severely.

Upon the question of the treatment of these functional nervous disorders, I shall not venture to do more than generalize. Detailed discussion is out of the question here and now. It is the tritest commonplace to say that in this field, chiefly, the quack and charlatan find their most profitable stamping ground. I need not try to explain in detail why this is so. The fact is patent and has been for centuries. One very important item in the explanation of it is that what these sufferers most need is moral support, the substitution of a strong will and a fixed faith in the means of cure, for their own vacillation and discouragement. If this is not provided for them by a scientific and rational man, they will seek it from a christian scientist, an osteopath, a Shaman, a spiritualist, a Gypsy fortune teller, or any other of the charlatans who have existed from time immemorial, in all stages of civilization and in all communities.

It would be too much to expect that, human nature being as it is, and the primordial gullibility of *homo sapiens* being so invincible, the irregular will ever be banished from the earth. The sharps will continue to live upon the flats, in medicine as in all other walks of life. But our duty is to protect the public, in virtue of a better training and higher ideals, and we can best do this by inquiring in the first place how well we actually

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furnish that which the public needs in the way of moral support. The old saying was, "*Ubi tres medici, ibi duo athei*"—"Three doctors, two atheists"—and in the days when dissection was a profaning of the image of God and chemistry only the black art, the clergy and the people too may, perhaps, be excused for having believed the physician, who was almost the sole student of natural phenomena, to be unorthodox and hostile to religion and even to good morals. This feeling persists in a modified form very widely, and the fault is partly ours, or how could the genial Mr. Dooley, of Chicago, believe that, as he puts it, "If only the christian scientist had a little more science, and the doctors a little more christianity, a sick man would be well enough with either of them, if only he had a good nurse." I believe that it is more than a mere coincidence that just when the healing art is becoming more of a science than even forty years ago had ever been dreamt of, these forms of irregular practice, by occultism of one sort or another, and the mixture of religion and medicine seen in spiritualism and christian science, should have become so prevalent. They flourish chiefly in urban communities and are quite exotic in the rural, and their prevalence is greater in Germany, the home of scientific medicine, than elsewhere, if there is any truth in the statistics published in that country this summer, when a strong attempt was made by legislative enactment to put them down. It is more than a mere coincidence that in rural communities where these isms do not flourish the general practitioner still holds sway, while in the cities he has largely been supplanted by the specialist, so that the family that has half a dozen doctors entering their home in the course of as many months has no familiar trusted mentor and friend to whom to go in times when they are hesitating between the priest and the doctor. Of course there are other reasons for the prevalence of quackery, and among them the belching press which unloads tons of undigested and indigestible Philistine stuff upon the public, filling them with the idea that they are highly educated and really capable of an intelligent opinion on all ethical and medical questions. What could good old Sir Thomas Brown have said to-day, when two hundred and seventy years ago he thus bewailed that new German invention, the printing press:—"It is not a melancholy wish of my own, but the desire of better heads that there were a general synod, not to unite the incompatible difference of religion, but for the benefit of learning, to reduce it as it lay at first, in a few and solid authors; and to condemn to the fire those swarms and millions of rhapsodies begotten only to distract and abuse the weaker judgment of scholars, and to maintain the trade and mystery of typographers."

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In short, I believe, that to some extent at least, we are ourselves responsible for the evil, in that we are letting ourselves become so engrossed in the pursuit of the cause and results of the disease as to forget the patient, looking at him as a test-tube or a control animal, regarding the sick-room as a laboratory, and considering the physics rather than the metaphysics of disease. The public are shrewdly, even if subconsciously, awake to the changed attitude of the profession, and, without being themselves able to say why, are showing a tendency to seek what they wish, and in a very real sense need, from other sources. Hence it is, in part, that we see, as Tennyson with his usual gentle pessimism puts it, "Craft with a bunch of all-heal in his hands, followed up by his vassal legion of fools." How can we remedy it? First, and chiefly, by giving attention to psychological medicine. It is time that the energy and acumen and scientific conscientiousness of the profession were being directed in due proportion into this channel. Not that the older channels or the newer researches are to be neglected, but that we should study ourselves and teach our students the necessity and usefulness of legitimate suggestive therapeutics, and so cut the ground from under the feet of the charlatan. It is rather to our discredit that we should have let others occupy this field before us, most of them for their own selfish purposes, with ignorant and misleading treatises of which we may say as Sir Thomas Brown did:—"Pieces only fit to be placed in Pantagruel's library, or bound up with *Tartaretus de modo Cacandi.*"

Of course, not every man can become a Weir Mitchell or a Tuke, but every one of us, from the third year student up, can realize without becoming a therapeutic nihilist or agnostic, that far more important than medicines are the management and moral support, the judicious arrangement of business and family affairs, the conservation of the daily output of mental and nervous energy by both physical and psychical channels, and the preservation of due balance between that output and the daily or rather nightly restoration of that expended energy. On all these points no one can possibly help the public so well as we can, if we but recognize their need in this regard.

The standard is not too high, and I am sure that our profession, by simply sticking to it, and displaying those qualities of head and heart and conscience which by mere contact with the sick made Hippocrates a practical Christian in the fourth century B.C., can finally educate the laity above the level of vulgar quackery, and bear their part in bringing about the poet's vision of

> "Aeonian evolution, swift or slow,
> Through all the spheres an ever opening height,
> An ever lessening Earth."

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# A REPORT ON THE SYSTEMATIC USE OF ANTITOXIN AS A PROPHYLACTIC MEASURE IN DIPHTHERIA AT THE HOSPITAL FOR SICK CHILDREN, 1902-03.*

By J. S. A. GRAHAM, M.B., Toronto.

During my term as intern at the Hospital for Sick Children, I had the opportunity of observing the effects of the prophylactic use of diphtheria antitoxin, and it is with great pleasure that this report is presented, for it is one, I think, from which convincing proof of the great value of the systematic use of this antitoxin may be obtained; but, before going further, I would thank Dr. Arthur Wright for the great assistance he has given in keeping up the records of his wards, and for his close observance of all cases under his care.

The hospital, I may say, has never been free, for any length of time, from diphtheria since its establishment on College Street. It would break out in isolated cases in spite of the great care taken in the selection of cases—by using a daily report from the City Medical Health Officer in which are given the names of those developing diphtheria in the city limits, the number of the house in which they lived, and the school attended; also by having all visitors sign a book, stating that they have not been in any residence in which there was infectious disease, for at least twenty-four hours, and absolutely prohibiting their entrance if there was infectious disease at their home, as shown by the report of the Medical Health Officer. Yet in spite of these precautions, cases continued to develop.

The suggestion that antitoxin should be given every twenty-one days to every patient in the hospital was made by Dr. Goldie. Through the kindness of the Superintendent, Miss Brent, who has shown untiring energy in the suppression of infectious diseases in the hospital, correspondence was held with various hospitals for children in the United States, as to the use of diphtheria antitoxin for immunity purposes. Some stated that they had given it up, others again could not say enough in its praise—of the latter I might particularize the Boston Children's Hospital, remarking in their reply that they had never been able to rid themselves of diphtheria until after the systematic use of the antitoxin.

The systematic use of the serum was commenced at the Hospital for Sick Children on July 10th, 1902, 500 units being

*An address delivered before the Post-Graduate Society of Toronto, November 25th, 1903.

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given every twenty-one days to every child over three years of age, and 250 units at the same period to those of three years and under, and on the recommendation of Dr. Rudolf records of all cases were minutely kept. This was started at the time the serum was first given, and in these records were placed the name of the patient, the age, the disease, amount of antitoxin, and any remarks which might be made as to eruptions, elevations of temperature, etc. This, however, was discontinued, and all remarks were made on the history chart, of which there is one for every child in the hospital. These charts, as well as the temperature charts, were subsequently gone through, the medical cases separated from the surgical, the surgical again subdivided into suppurative and non-suppurative. Baby ward cases were classed by themselves. By this means we are able to find out accurately what reactions, as evidenced by eruptions, etc., occurred, and what were the variations of temperature, and what relation they might bear to these eruptions and other disturbances.

Use was also made of a record of all cases sent to the infectious ward, for which I am greatly indebted to Dr. Rudolf. In it are notes on all cases of diphtheria from January 1st, 1902, until the present time. Before that time we had no records, but on inquiry from the hospital authorities, I find that the number of cases which occurred the six months previous to the time when systematic use was made of the serum, could be taken as the number occurring in an average six months for that period of the year, the remaining six months being somewhat freer from diphtheria.

As regards the records that have been compiled, they are complete in the cases of 384 patients or 1,056 injections, but incomplete as regards some 200 more patients or about 600 more injections. All percentages are struck from the 384 patients, the records of which I am absolutely certain, but as regards the incomplete histories, I imagine they are so, simply on account of the fact that there was nothing noteworthy to record. The object of this paper is to try briefly to prove that the systematic use of antitoxin produces immunity to diphtheria, and that the bacilli, though present, were inert; but more especially to show what disturbances were produced by its constant administration. From the records of Dr. Rudolf of the cases of diphtheria occurring from January, 1902, to July, 1902, and taking that as an average six months, I find that there occurred forty-two cases of diphtheria—which, in all but five, gave true clinical symptoms, marked rise in temperature and increase in the pulse rate, with formation of membrane, etc., and not cases as has been suggested, simply of tonsillitis in which a swab was taken and in which diphtheria bacilli were inci-

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dentally found. For the six months following the use of antitoxin there occurred not a single case, and for the remaining six months there occurred eight cases. Let us consider these eight cases.

Four of the eight patients were infants under one year of age, all of whom had been sent into the hospital suffering from malnutrition and intestinal disturbance. None of these patients gave clinical signs, and swabs were merely taken as a routine measure when there was noted some elevation of temperature and redness of the fauces. All of these patients died, not at all from diphtheria, but from intestinal disturbance. This was commented on by one of the visiting surgeons who opposes its use in infants, and who states that in some New York hospitals its constant use was abandoned in infants, on account of the fact that catarrhal diarrhea was found more often when it was used. We may consider this objection later. Of the remaining cases, one was a boy aged fourteen years, who entered the hospital, January 14th, with an acute secondary anemia, and on January 15th, was placed in a suspect ward, a membranous patch being noted on one tonsil. A swab was taken, and the result positive. The disease in this child was very malignant, yet no other child in the ward in which he had spent the night developed diphtheria.

A second was a case of hip-joint disease, which developed diphtheria twenty days after the injection of the last prophylactic dose. This case, I may say, died seven days later from general miliary tuberculosis. One might note here the length of time from the last immunizing dose.

There was another case of cervical Pott's disease, in which the patient, a boy of three years, developed diphtheria after the third injection. This and the following one are the only two to which no objection can be taken as to the origin of the infection and the relation to the immunizing dose. This case was mild, with no distinct membrane, and requiring but 3,000 units of antitoxin. The duration of this case was short, being only twelve days in the infectious ward.

The other case referred to was also one of Pott's disease. The throat was first complained of eight days after the fifth injection. A swab was taken and examination showed Klebs-Loeffler bacilli. He was given 27,000 units in thirty-one days, his temperature coming down to normal after twenty-eight days. I might remark that this case developed scarlet fever, and that the temperature remained elevated from this cause. The antitoxin was continued on account of a false membrane on the tongue, afterwards discovered to be due to calomel. This case and the one preceding are the only two for which apology must be made.

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The following and last case, which was transferred to the infectious ward, is not included in the eight cases just described, for reasons which will be seen later. The case was that of a boy two years of age, who entered the hospital suffering from convulsions. There was marked phimosis and diarrhea, which, being corrected put an end to the convulsive seizures. I may state that at his entrance there was a nasty discharge from his nose, which was purposely left unexamined. The child was allowed to remain in the ward with the other children, but as a safeguard, large doses of antidiphtheritic serum were given to him. He, however, developed scarlet fever and was transferred to the infectious ward; but before the transfer was made a swab of the nasal discharge was taken and examined. This showed a pure culture of Klebs-Loeffler bacilli. I may state that this youngster died of a very malignant form of scarlet fever, but again call your attention to the fact that no child who was in the same ward with this case of nasal diphtheria during his fifteen days' sojourn there developed diphtheria.

The next two cases are of especial interest, but also not included in the aforementioned eight, as one was not transferred to the infectious ward, no diphtheria being diagnosed until the day before death, and the other, a case of a nurse who had received no immunizing dose. The first, a boy one and one-quarter years of age, with talipes equino-varus, received the first immunizing dose of 250 units on October 10th, the second on November 3rd. On November 18th, temperature 104.6, a patch of pneumonic consolidation was made out. On November 30th symptoms of meningeal irritation were noted, spasticity of the limbs, retraction of the head and irregularity in the reaction of the pupils. On December 4th the left ear commenced to discharge, and on December 5th, the second ear, the meningeal symptoms abating. At this time there was a marked ileo-colitis; also a fresh area of consolidation was found in the other lung; a friction rub was also obtained. The temperature remained about 101° until December 13th, when the child developed symptoms of laryngeal obstruction. A tent-bed was employed and large doses of antitoxin given, but the patient died in the early morning of December 15th, with symptoms of laryngeal obstruction.

At post-mortem there was found no sign of any meningeal trouble. Pneumonic consolidation was found in the right upper lobe, and, on examining the larynx, superficial ulceration of the false vocal cords was seen, a smear from which showed Klebs-Loeffler bacilli; a culture made, the same. Cultures were taken from the gall bladder, lungs and pericardium, all of which showed staphylococci. This child, it will be seen, had

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no antitoxin from November 3rd until December 14th. This was neglected on account of his precarious condition.

This case is interesting on account of the fact that the nurse who cleaned up the post-mortem room before it was fumigated, developed diphtheria four days later, but none of the children in the ward from which he was taken—the baby ward—were infected. This helps to show, I think, that the germs were inert in so far as the immunized children were concerned, but not so in the case of those who were not rendered immune. This is small ground to go on if one had not additional proof, for which I am indebted to Dr. Goldie. The year before the systematic use of antitoxin was employed swabs were taken of all children, nurses, domestics, etc., in the hospital, and of 121 swabs, Klebs-Loeffler bacilli were found in 11.56 per cent. The following year I took swabs of the children alone, and so that there might not be any variation in the classification of germs, Dr. Goldie again examined the smears, and it is his report I use. Klebs-Loeffler bacilli were found in 12.9 per cent. of these cultures, 8.6 per cent. of which came from one ward.

Again, let us take the case of Dr. Wright, who developed nasal diphtheria in May, 1903, and who went about the hospital for a week or so with nose discharging, before a diagnosis was made on nasal examination, and yet no child developed diphtheria.

This, I think, will prove beyond a doubt that the bacilli were present, but inert on account of immunization.

I will not attempt to make any further remarks on this part of the paper, but rather let the cases reported speak for themselves, except to say that from January 15th, 1903, until the third week of November, 1903, no case of diphtheria developed. I shall now speak of the eruptions and other manifestations of disturbance.

## RASHES.

The eruptions of antitoxin may be classed with those produced by toxins, such as drugs, ingestion of poisonous foods, anto-intoxications, etc., under the head of erythema, and, like them, due to a toxemia. This may be described as a local and a general reaction, the local being often accompanied by a general reactive disturbance of vasomotor tone. This in the majority of instances is not the case, so that in the statistics which follow these local reactions will not be included.

*Local.*—The local reaction, consisting of a circumscribed edema or wheal on an erythematous base, the centre of the wheal being the site of injection, is seen from three to four hours after serum has been introduced, and lasts from eight to twelve

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hours, when it is noted to gradually fade. This local reaction, of course, varies in different individuals from a very small urticarial elevation to one of three or four inches in diameter the erythematous base varying in proportion. Well-marked local wheals have been found in 23 per cent. of all injections.

*Etiology.*—At first I thought it was due simply to mechanical causes, the wheal being produced by the fluid injected filling the lymphatic spaces and causing the blood to be forced from the vessels in the immediate neighborhood and explained the redness and congestion which occurred about the wheal, in areas not directly exposed to mechanical injury, in the same way that injury to the cornea causes reaction in the conjunctiva by reflex vascular innervation; or to the excitability of the peripheral vasomotor nerve centres in the vessel-wall, being reflexly affected by nerve injury at the point of injection. At present I doubt very much whether simply the distending of the lymphatic spaces and the local injury can be counted to any great degree as a factor in producing the edema and surrounding erythema, as considerable time elapses before the true wheal is produced, and from the fact that in one type of general reactive disturbance we find urticaria widely distributed on different parts of the body. This one might attempt to explain as due to reflex causes produced by local injury; but they are too widespread and not symmetrical. The toxic theory is the most likely one and would explain both the local and general reactive disturbances. A substance foreign to the blood is taken into the circulation and it either acts *per se* or by some chemical change, possibly on the peripheral vasomotor nerve centres in the vessel-wall causing dilatation of vessels, slowing of the blood-stream and marginal derangements of the whites with exudation of blood plasma on account of increased permeability of the vessel-wall; but more probably, as Phillippson states in the *British Journal of Dermatology*, January, 1900, opposing the current opinion that urticaria is due to reflex nervous action on the blood vessels, agreeing with Heidenhain as to the secretory action of the vascular endothelium, and that the edema is caused by direct action on the endothelium of the vessels, due to excretion of toxin, and concludes that urticaria is a mild inflammation of low intensity exerting local action.

Now the question of susceptibility suggests itself, in which case these urticarial elevations produced at the site of injection are local manifestions of general constitutional effects, the manifestation at the one particular point being due to local injury and decreased vitality.

Let us consider now the general type of rash, and we find that this theory is further borne out by the fact that of the ninety-six injections which were made on July 10th, 1902, 16,

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or 15.6 per cent., developed rashes of a general type, while of all primary injections, those of July 10th being excluded, there only developed rashes in 6.5 per cent. I might remark that the serum first used was Mulford's preparation, and that during the remainder of the year we used that of Parke, Davis & Co.

### General Reactive Disturbances, as Evidenced by Rash

As before stated, 23 per cent. of all injections developed a single urticarial elevation at the point of insertion; but, excluding these, there was found to be a general reactive disturbance, as evidenced by rash, in 3.88 per cent. of all injections, or 10.6 per cent. of all patients developed a rash at one time or other—excluding the injection of July 10th, 6.5 per cent.

These figures need some explanation. It may be seen that of the three hundred and eighty-four patients some would receive it as often as seventeen times. others again but once or twice, the number of rashes for all injections being much lower than the percentage of rashes for all patients. The only explanation of this is that immunity to antitoxin must play some part. Of all cases 68 per cent. developed a rash after the initial dose, leaving 32 per cent. to develop rashes after succeeding injections. In this 32 per cent. are included some petechial rashes which have really no relation to antitoxin, and also some of doubtful origin. Then, again, when it is considered that over thirty cases received antitoxin more than ten times, making 300 odd injections out of a total of 1.056, that some immunity to antitoxin has been effected and also brings out the fact that the antitoxin used must have been uniform. This will be considered again under General Constitutional Disturbance.

There requires to be described four distinct types of erythema:

1. The urticarial.
2. An erythema with minute papular elevations.
3. A general roseolar erythema.
4. The purpuric.

Of these the urticarial was by far the most common, occurring in all but eleven cases, which were distributed as follows: two were of the second variety, the circumscribed erythema with minute papular elevation, four of the general roseolar type, and five purpuras, of which two alone should be described, the other three being petechial in character and due to other causes.

The lesion in the urticarial type is the same as that described occurring locally at seat of injury, and is of a migratory character, presenting itself in from twelve hours, or even less time, to three or four days. Its onset is from two to thirteen days after the injection has been made; but curiously enough, in a

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great majority of cases, it is first noted on the fourth day. The sites of predilection are the face and hands, or the exposed parts, but no part of the body is exempt. In one case the penis was much swollen, a giant urticarial elevation being present at the junction of mucous membrane and skin.

The urticaria is often accompanied by itching, but as a rule no other symptoms are present. Nausea occurred in a few of the cases, and in a few some elevation of temperature, although the latter was the exception, the up-patients being able to walk about with no feeling of distress, unless it were mental. In three of the cases noted there was associated swelling of the hands and feet. In two others the swelling was seen about the small joints of the fingers and at the knees respectively. The disturbance in these five cases lasted from three to five days. The rash in the two latter cases presented itself first, the swelling appearing in the one case the day after the eruption, in the other it was three days. In only two of these five cases was there any elevation of temperature, and in no one of them was there any kidney involvement. The constitutional symptoms, however, will be considered later. The two cases of swelling about the joints and one of the other three occurred after the injection of July 10th, 1902.

The second variety differs from the first in that instead of wheals we find papules, which do not develop into vesicles, never become scaly, and are of transitory duration. In the two cases recorded there was a complete disappearance of the rash in twelve hours, and in neither was there any feeling of discomfort or rise in temperature. This variety may simply be regarded, I think, as a modified manifestation of the urticarial.

In two of the four cases developing a general erythema without papules or urticarial elevations, the constitutional disturbance was greater than any of the others, the hemorrhagic not excepted, for in both of these cases there was edema of the tissues about joints with constitutional disturbance. In one case the reaction was manifest nine days after the injection, which was that of July 10th.

On July 19th hands were swollen; an erythematous rash covered the body.

On July 20th the knees were swollen. The erythema was especially well marked on this day on the anterior surface of the knees. There was no pain, simply a feeling of stiffness in the joints.

On July 22nd the legs and feet were swollen; the eruption had disappeared from the rest of the body, and on July 23rd all swelling had disappeared. The temperature in this case was slightly elevated, being highest—101.5°—at the time the knees were swollen, or at the height of the reaction.

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The other case in which the disturbance was marked, the reaction was noticed five days after the injection, the body being covered by a rose rash, associated with swelling of the hands and feet. In this case the disturbance in temperature was not great, the maximum 99.6°, which occurred the same evening the eruption was seen; vomiting was marked, but of short duration, lasting only one afternoon, and all symptoms had disappeared in thirty-six hours' time.

In the remaining two cases of the four there was nothing noted other than a scarlatinal-like eruption, which covered the whole body. These two cases were isolated, but readmitted to the wards twenty-four hours after isolation, all traces of rash having disappeared. In one of these cases the erythema appeared five days after the injection; in the remaining case it was only twelve hours. No variation in temperature noted.

Of the five purpuric rashes two alone, as before mentioned, should be described. Of the other three two were in infants under eight months of age, one suffering from congenital syphilis with associated intestinal disturbance, the other a case of marasmus; the third was a case of empyema in a girl one and a half years of age. All three of these patients died.

The character of the rash in all was petechial, and was noted in the case of congenital syphilis four days before death. Antitoxin had been given the day before. In the case of marasmus the day of death, twenty-nine days after the administration of antitoxin, and in the case of empyema, two days before death, the antitoxin had been given a week previous.

Two true purpuras remain—one a case of morbus coxæ in a quiescent state, the patient going about with a hip splint. The effusion was noted on the third day on the outer surface of the thigh, and covered about two-thirds of that surface. The injection had been made in the buttock of the same side, but the local reaction had completely disappeared at the time of effusion. In the evening of the same day a purpuric rash appeared on the arm of the same side. There was no elevation of temperature at the time the rash was first seen, but for the following three days the temperature was slightly elevated, possibly due to absorption of fibrin ferment.

The pigmentation disappeared slowly, going through the various color changes when the patient was discharged on August 2nd, twenty-three days after the injection had been made. It will be seen that this also occurred after the injection of July 10th.

The second, a case of middle-ear trouble, where the purpuric area occurred at site of injection, there was a local urticaria associated with effusion of blood. This type has been named purpura urticans. There were no constitutional symptoms, except some slight headache.



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This case ought, perhaps, to have been described with the local reactions, but as the local manifestation with general constitutional disturbance will be next described, it may not be out of place.

### General Constitutional Disturbances With Local Manifestations.

In taking up the general constitutional disturbances, we will consider only the few cases in which the local erythema, instead of disappearing in a few hours' time, as was the general rule, took on the character of true inflammation, if I may use the term. Two cases were of empyema. In this one the wound had closed, and the temperature had been fairly normal with slight evening elevations. The hip in which the injection was made was swollen and tense, temperature being 99.8°. Carbolic baths were employed with good result. Improvement was noted the following day, and in three days all disturbance was at an end. In the second case of empyema, after the second injection the thigh became swollen and red, the redness and induration being most marked at the point of insertion. The temperature rose to 103°, remained elevated for two days and fell as swelling disappeared. I may remark that before the antitoxin had been used the temperature was running about 100 with morning remissions.

### Two Cases of Pott's Disease.

One case was acute with discharging sinus. Twenty-one days after the administration of serum the patient complained of pain at the site of injection and four days later four ounces of pus were removed on incision. This record must surely be imperfect, as it is impossible that such inflammatory reaction should occur at so late a date without previous symptoms.

The second was a like case, with discharging sinus above the groin. There had been evening elevations of temperature, but no exacerbation before antitoxin was used. It was after the fifth day that brawny induration occurred at the point of injection. The temperature was elevated to 101.6°, it dropped the following day, but again rose to 102°. After three days all signs of disturbance had disappeared.

### Two Cases of Morbus Coxæ.

In the first case after seventh injection the leg had become progressively swollen and tender. On the fourth day temperature rose to 104.6° and was of a septic character in the meantime. Resolution occurred; no other cause was likely as sinuses were discharging freely.

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The second was most peculiar. After the fifth administration, marked local brawny induration developed with elevation of temperature and suppuration occurred. The visiting physician requested that no further injection of antitoxin be given, but after seven months, when a change was made in the house staff, antitoxin was inadvertently used. The patient developed marked general constitutional disturbances, lips and eyelids became swollen with giant urticarial elevations, and there was marked prostration. This case, instead of becoming immune to antitoxin, increased in susceptibility to the serum. All of these cases, it may be noted, were surgical and suppurative in character. Whether the infection comes from within or from without, is doubtful. It is probable that it came from within. Bacteria are being constantly taken up by the blood stream, and as we know that the bactericidal property of the blood is lowered after chronic suppurative processes, bacteria would find a good nidus for development at the point of injury. For were this not so, why should we not find local inflammatory reaction in patients, in the medical wards, of just as poor vitality?

Before taking up the general disturbances, and in connection with the case last mentioned, we might again consider the question of immunity to antitoxin. That such immunity is produced is proven conclusively to my mind from the following facts:

*Whereas,*—Of the 1,056 injections recorded, 384 were primary, and of all eruptions which occurred 68 per cent. developed after these 384 primary injections. Only 32 per cent. of all eruptions occurred in the 672 injections which remain. A fact may be noted which is remarkable in itself, that only in three cases patients developed more than one rash, and that in each of these cases the eruption occurred after succeeding injections.

## General Constitutional Disturbances.

I might say in this connection that it is the exception that any such disturbance occurs, and that of the 1,056 injections which I have noted, with the exception of the few cases reported in which there was disturbance at the time of eruption, there were very few who manifested any symptoms whatever. We will, however, consider the variations of temperature which did undoubtedly occur, and as we know how easily the temperature of children is affected, this, I think, may be taken as a fair criterion of the amount of general constitutional derangement produced.

It is extremely difficult to separate elevations of temperature which occurred in the interval between administrations and to say what is due to antitoxin and what to other causes, but

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elevations of temperature which were not immediate and which did not occur in conjunction with any eruption or other manifestation of disorder need not be included. On going over a great number of temperature charts I found that there was as great variation of temperature not attributed to any cause before the use of the serum as after.

A visiting physician is very apt to attribute any rise in temperature to antitoxin. It is the one constant factor present to which suspicion may be attached, and acts as a good scapegoat, but from the very few times it is made use of by them, we may judge how infrequent such a rise in temperature is. As a matter of fact, I find from the records the rule is that there is no change in temperature. In the few cases in which there was found any such change, the temperature is oftener sub-normal for one or two days than elevated. In those cases in which there was any elevation of temperature it was remarkable that in nearly every case it occurred on the surgical side, and in those listed as suppurative. I attempted to strike percentages, but found it such a complicated matter that I, of necessity, abandoned the attempt.

Before leaving the general constitutional disturbances produced, we may cite the single case in which there was found any kidney change. The patient was a girl of six years of age, suffering from morbus coxæ. After the sixth injection on November 3rd she developed general urticarial symptoms. On November 27th the injection was again given, and the patient allowed up with hip splint. On December 13th the temperature was elevated, and urine showed blood, some pus and epithelial, and blood casts. On December 30th antitoxin was again given, but did not increase the kidney symptoms, for on December 31st we have a note that all traces of blood and albumen had disappeared. None was noted after this, although the patient remained in the hospital for some months, and serum was regularly given.

Before concluding I might simply state the objections made to its constant use by some of the visiting staff—objections based on last year's observation.

One objection was that it in some way renders children more liable to intestinal disturbance, and that their general health is impaired by its constant use, as shown by eruptions.

The opinion of the man who makes this statement is founded on one of the cases of petechial eruption, the case of empyema, one and a half years of age, which developed the rash a week after the administration of the serum, and who died some few days later. This case developed a catarrhal diarrhea, but is it not more likely that the petechial eruption was due to absorption of toxin from the intestine? I might add in this connection

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that diarrhea in these cases of malnutrition has not been more frequent since the use of antitoxin than before.

The only other member of the visiting staff who has made objection is a surgeon, who complains that suppuration is set up in some unknown way in clean wounds. I may say that the two cases of which he complains were the only two, after that particular operation, in the hospital so affected, and can really not be considered.

In conclusion, I may say that there have been no bad effects noted by me from its constant use, other than the few cases in which local inflammatory reaction occurred, and that it is only in these cases it must be considered whether the immunity to diphtheria is gained at too great a cost.

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## ANESTHETICS AND SURGERY.

Notes from Hospitals of Buffalo, New York and Baltimore.

By JOHN HUNTER, M.B.

One could easily fill pages with details of major operations, in which much blood was shed by masterful surgeons. Fortunately this class of work seldom falls to the lot of the rank and file, and more fortunately still for the patient when the general practitioner is brought face to face with such an emergency, his intelligence with the skill and resourcefulness acquired in a wide experience, enables him to render efficient service. There is an obligation that comes to every physician more or less frequently, and often very unexpectedly, that is, the administration of an anesthetic, and there are probably few things undertaken by the average practitioner with so much censurable indifference to its importance as the use of an anesthetic. In minor operations practically all the danger centres in the anesthetic, whereas in the more complicated and hazardous ones the danger from the anesthetic increases *pari passu*, with the character of the operation. This culpable ignorance or negligence, so manifest in regard to the use of anesthetics, is chiefly due to three causes. Primarily, to insufficient or defective teaching in our medical colleges. Is it not quite possible for a young man to graduate with the idea that the administration of an anesthetic is of practically no more consequence than the sprinkling of perfume on his handkerchief when going out to see his girl? It is true that hearts often become perturbed by the waving of these handkerchiefs, but the most disastrous effects always come to those who use them. If the anesthetic would only kill the ignorant or careless anesthetist, instead of the confiding patient, there would be little cause for complaint.

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The result would be very similar to what Pat told the man who asked him, "What complaint did the coroner's jury find?" "None, sir, everyone was well satisfied." Secondarily, the surgeon's attitude toward the anesthetist. How often when discussing an operation with his patient the surgeon, unwittingly of course, says, "I will get somebody to give the anesthetic, leaving the patient, only too often, to imagine that this part of the work is of very trivial importance. Every intelligent surgeon knows that in regard to the safety of the patient the anesthetist stands on a perfect equality with himself. If the surgeon chooses an incompetent man, he is either criminally careless about the safety of his patient or grossly ignorant about the use of anesthetics. Lastly, the miserable pittance assigned the anesthetist—and by-the-way very often difficult to collect—a fee of $2 to $5, whilst the surgeon's is anywhere from $100 up, is altogether too contemptible to even come within range of discussion.

The cure for the present evil conditions surrounding the art of administering anesthetics: (1st) Proper facilities for teaching this branch, and ample provision made for all graduates to acquire a practical knowledge of the art of administering anesthetics. (2nd) Every surgeon should inform his patient that the services of a competent anesthetist are of equal importance with his own. The anesthetist should have ample opportunity for making a thorough examination—including family and individual history—nose, throat, chest, digestive and renal functions. (3rd) Every physician should so strive to master the subject of anesthesia, and perfect his technique of this art, that when an emergency arises in the operating room he can inspire the confidence, and immediately assume the role of a Wellington or a Bonaparte—order the surgeon to protect the field of operation, and so dispose the assistants and nurses that all may render the most efficient and prompt service in aiding him in restoring the vital functions. The recuperative forces of decades must be concentrated into moments when asphyxia or syncope occur. (4th) The anesthetist should always arrange with the patient about his own fee. He should never leave himself open to receive such a reply as this, "My doctor didn't attach any importance to your work. He said he would get somebody to give the chloroform. I don't consider I owe you anything. My doctor can settle with you if he likes." The anesthetist is the ally, never the servant of the surgeon, and self-respect should inspire him to assume a perfect equality, thus entitling him to a fee commensurate with the patient's ability to pay. The unselfish anesthetist, like his unselfish confrere, the surgeon, when necessity appeals, will contribute his services in full measure, "heaped up and running over," for "sweet charity's sake."

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The writer, anxious to render whatever help he can to raise the whole problem of anesthesia from the slough of indifference and incapacity in which it is meandering, devoted all the time he could spare to the anesthetic rooms, and to discussing this subject with the anesthetists and surgeons of Buffalo, New York and Johns Hopkins' hospitals.

### Anesthetics Used.

In Buffalo, and in practically all the other hospitals visited, ethyl chloride, nitrous oxide, ether and chloroform were used. Ethyl chloride is put up in small tubes, with a tap arrangement to allow it to escape in the form of a spray. A rubber mask, accurately fitting the front of the face, is attached to a light metal tube, about four inches long and three in diameter. A wire screen near the bottom of the tube is wrapped with gauze. The ethyl chloride is sprayed gently on this gauze. The first patient, a strong young man, after inhaling a few whiffs of the chloride was seized with lock-jaw. The spasm was so intense that chloroform had to be quickly administered, before the lower jaw could be forced open. The other patients took it quietly enough. Nitrous oxide and ether were both administered with Bennett's inhaler. As soon as the patient became partly unconscious, ether or chloroform was resorted to, and used throughout the operation—ether generally.

In discussing the question with the anesthetists the following (out of many other) features, some of which have been stated above, came up:

I. Careful, and if necessary, repeated examinations of the patient as already outlined.

II. A properly heated, well-ventilated room, very few attendants, and absolute quietness on account of the increased acuteness of hearing, until the patient is fully anesthetized, and the possibility has passed of the whispering or talking being misconstrued to the extreme annoyance or danger of the patient. Have an assistant willing and strong enough to throw any whisperer or talker out of the window. Better kill a fool any time than an intelligent patient. Anyone so ignorant or reckless as to whisper, laugh or talk during the administration of an anesthetic is a dangerous nuisance, and should be "fired" at all hazard.

III. No rough or extreme measures of restraint. Beware of any constriction of throat or chest.

IV. Recumbent position—head on level with the body—face turned to one side to allow secretions to escape.

V. Finger kept on angle of lower jaw to make it protrude so as to carry epiglottis and base of tongue upward and forward.

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The base of the tongue may fall back into the laryngo-pharynx and immediately produce stertorous breathing, or asphyxia.

VI. Watch movements of chest. Trusting to the mere act of breathing may prove a dangerous delusion. The lungs must be sufficiently inflated to expel all surplus of carbonic acid and anesthetic. Accelerated, lessened, stertorous, or labored respiration indicates danger if at all persistent.

VII. The same in regard to accelerated, diminished or irregular pulse beats.

VIII. Congestion, cyanosis, and extreme pallor indicate impending asphyxia or syncope, or both.

IX. Iris reflexes—tremulousness, rapid contraction or dilatation of the iris muscle—may indicate too profound narcotism.

### Asphyxia, Syncope.

The moment the cessation of either respiratory or cardiac action is noticed, remove mask and ask surgeon to immediately protect field of operation, and assistants to lower the head and elevate lower portion of body. Draw tongue forward and titillate it, immediately begin artificial respiration, carry elbows down and partially across the chest so as to make compression. Have pressure from below upwards made on abdomen at the same time. Bring arms round in a circle to meet above the head, repeat regularly fifteen or twenty times a minute until respiration is restored or all possibility of resuscitation has vanished. The windows widely opened and bodily heat maintained with hot bottles and blankets.

### Cardiac and Respiratory Stimulants.

Strychnia, nitro-glycerine, *digitalin*, *adrenalin*—although status of this drug is not assuredly established yet—whisky and normal saline solution, bovril, coffee by enema. First five may be used hypodermically.

An intelligent nervy, resourceful anesthetist, like the skilful mariner, may rescue his patient from impending destruction, whereas ignorance and bungling do not help to save, but only hasten death.

In discussing the choice of anesthetics with the surgeons, Roswell Park, and Palmetter of Buffalo, Blake of Roosevelt, McCosh of the Presbyterian, and Cullen of Johns Hopkins, all favored ether on the ground that they thought it was probably safer in the hands of the ordinary picked-up-by-chance anesthetist. All agreed that chloroform in the hands of a competent anesthetist, and given without deviation from the rules laid down by Lister, Probyn-Williams, and by all scientific writers on anesthetics, viz., drop by drop was as safe an anesthetic as any other.

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## Surgery—Nose and Throat.

Two years ago adenoids were on the fire-line. Gottstein's curette, Quinlan's forceps, and the less aseptic finger nails were working overtime in order to destroy the succulent crop of adenoids. This time there seemed to be a complete famine in adenoids. I only saw one scrunty specimen removed, and this was done to illustrate surgical methods. This year the middle turbinal, especially its posterior bulge, is the arch-fiend amongst the numerous progeny of respiratory obstructors. Snare, trephine, and saw-edged scissors were tugging, boring and crunching this fragile little bone that has been so suddenly forced into a most unenviable notoriety.

Deflections of the triangular cartilage were straightened at the Post-Graduate School by making a button-hole incision at the convexity, passing a probe pointed bistoury through this, cutting forward toward the bridge of the nose, and backward to the ethmoid or vomer. Suitable forceps were then passed in and the segment of cartilage seized, rotated from side to side to loosen its attachment before and behind. The occluded nostril was then packed tight with compressed cotton wedges. These expand on becoming moist, and correct the deflection.

## General Surgery.

The ordinary antiseptics are used, and each surgeon has his own fad in technique. Roswell Park cauterized the stump of the appendix with carbolic acid, and then embedded it in the lumen of the bowel, closed the wound with through and through sutures of silkworm gut, and dusted on an antiseptic powder. He laid down a general rule for locating the appendix. There are two longitudinal layers of fibres on the cecum. These lie on opposite sides, and if followed to their junction, thereabouts the appendix will most usually be found.

A rather unique operation was performed at Roosevelt on an aged patient for malignant disease of the penis. The dissection involved the roots and the body of the penis for about two inches along the urethra, where it was amputated. The stump of the urethra was brought down through an opening made in the perineum and stitched to the skin about an inch behind the scrotum. The patient experienced no trouble, other than that of conforming to the position authorized as proper by one-half our race. If Babylonian or Persian potentate had known of this device he should have left his eunuchs to enjoy all the sensuous bliss of virility without any of its potency in action.

In Johns Hopkins, Cullen suspended a small uterus in a very old patient on account of pelvic and reflex symptoms being very troublesome.

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# Progress of Medical Science.

## OPHTHALMOLOGY AND OTOLOGY.

IN CHARGE OF J. T. DUNCAN.

### Coffee as a Cause of Blindness.

In the *Annals of Ophthalmology*, (abstracted in the *Medical Review of Reviews*) is a case of Toxic Amblyopia from the use of Coffee.

The patient, an apparently healthy, well-nourished boy, of eight years, was brought to the doctor's office by his mother, who stated that she had noticed failing vision the past five months, and that the boy had been sent home from school on account of his eyes. He had been fitted with glasses, bnt his vision had steadily become worse. Upon examination by Dr. Wing the conjuctiva was found normal, cornea lens and vitreous clear—pupil a little larger than normal and sluggish.—the optic disc was much congested, could hardly distinguish its outlines. Retinal vessels large, arteries smaller than veins, and visions barely $\frac{20}{200}$ in each eye for distance, near vision correspondingly reduced, field contracted.

There was no history of cigarette smoking, and no cause could be discovered until his mother said he had two cups of strong, black coffee at each meal without cream or sugar, and frequently when he visits his grandmother cake and coffee between meals. Six or eight cups of strong coffee daily for a boy of eight years old! Stopping the coffee at once and strychnine gr. $\frac{1}{60}$, t i. d. gave normal vision in eight days, and in a month more the field returned nearly to perfect condition. No return of trouble.

This case is a good illustration of the harm in giving young children what few grown persons would care to take for a steady diet. Children are much better off without either tea or coffee, and possibly some patients may need their habits corrected in this respect if we make more diligent inquiry in obscure cases of amblyopia.

### Aseptsis and Prophylaxis in Ophthalmology.

Archives D'Ophthalmologic in the *Journal of Eye, Ear and Nose*, says: "Carbolic acid, although a boon to the general surgeon, proved too irritating to the delicate tissues of the eye.

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Some of the drugs that have superceded carbolic acid are: Boric acid, 4-100; mercuric salts, such as biniodide of mercury, 1-20000, and bichloride of mercury, from 1-5000 to 1-2000 at the most.

"Thanks to the discoveries of Pasteur, we now know that the real cause of serious accidents and even deaths following operations on the eye, is the direct result of pathogenic microorganisms. The controversies which have arisen concerning the terms antisepsis, and asepsis have been unfortunate, and we think that the term asepsis should be preferred as being more genetic. Inasmuch as the free borders of the lids, on account of their structure, form a suitable nidus for microbes, they require special antisepic treatment. The lids and the surrounding tissues are first scrubbed with soap and water by means of a piece of cotton wool. This is followed by sterile water, and soap. The free boarders of the lids are then rubbed with a sterile piece of cotton containing a small amount of ether. Next they are vigorously brushed with a sterile piece of cotton soaked in biniodide of mercury and oil, 4-1000. The oil is allowed to act for some hours. Cataract cases are prepared in this way, on the evening before the operation, then the closed eye is covered with a sterile piece of gauze, or borated gauze, over which in turn is laid a piece of sterile cotton, all being held in place with a bandage. This dressing is allowed to remain in place until the moment of the operation. Before proceeding to the operation, the lids are widely separated by means of a speculum, and every nook of the conjunctival sac is carefully bathed with a solution of bichloride. Care should be taken not to operate on any eye, when there is reason to suspect disease of the accessory sinuses. All collyria should be aseptic, and be as little irritating as possible."

### What Can Be Done to Relieve Deafness Due to Chronic Middle Ear Catarrh.

C. P. Linhart, *American Medicine*, after presenting the usual routine of treatment, concludes as follows:—"In some cases I have found, after six months or a year's constant treatment, that there comes a lull in the improvement. I then advise the patient to quit for three or six months and then return and usually find that after the rest the ears are susceptible of further improvement. By sticking to these patients and encouraging them, it is surprising how much benefit can be got out of some such routine work as described above. Ehen is the hearing cannot be improved, materially, if the progress of the disease can be stopped, a great deal of good will have been accomplished."

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## Trachoma in the Public Schools.

W. A. Carhart (*Medical Review of Reviews*) says that the prevalence of contagious granular lids, or trachoma, in the New York City public schools was brought to the attention of Commissioner Ernst J. Lederle, of the Board of Health, about a year ago by a preliminary inspection of two schools, in one of which the percentage of communicable eye disease was 19.2, in the other was 15.5. An investigation into other schools disclosed 6,690 cases of contagious conjunctivitis among 57,450 children, of whom 2,326 had pronounced trachoma. These statistics led to the adoption of systematic and rigid inspection of the eyes of all the children in the public schools of New York by physicians appointed by the Board of Health. These Medical Inspectors, as they were called, had previously given their main attention to the diagnosis and exclusion of the common infectious diseases, such as scarlet fever and measles, but were now directed to exclude from attendance at school all cases of contagious eye disease, especially trachoma, and to require such cases to obtain treatment of their eyes before re-admission to their classes. The rush of cases which these regulations caused to present themselves to the various eye clinics and dispensaries was so great that all existing institutions found their facilities much overtaxed. Under these circumstances, the Board of Health determined to establish its own dispensaries and secured a building in which it established two clinics, one in the morning and one in the afternoon, daily for the treatment of trachoma. Two wards of twelve beds each were used for those cases requiring operation for their cure, and a staff of oculists and trained nurses were appointed by Commissioner Lederle for this work. Within a few weeks the capacity of the new Trachoma Pavilion was tested to the uttermost, 24 operations a day being the rule, and the clinics handling from nine hundred to a thousand cases daily.

From December 16th, 1902, to July 1st, 1903, the number of operations was 3,017, and cases treated without operation, 9,820, a total of 12,837 children treated. Since the close of the schools, the attendance has naturally decreased but when they re-open in September the work will be resumed in full force.

The present successful efforts in the crusade against trachoma are but the beginning of a continuous fight if there is any expectation of definitely conquering this widespread disease.

More buildings are to be opened as dispensaries—for there is the constant importation, despite strict inspection at quarantine, of fresh cases of trachoma among newly arrived immigrants. It is said that 85 cases of trachoma were found among the steerage passengers of *La Gascogne* and *Zeeland* on a recent inspection following the arrival of those steamships at New

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York. At present the only penalty for such importation of diseased foreigners is deportation at the expense of the line, but the proposed new emigration act imposes a large fine upon the company so offending.

There are few diseases which are more highly contagious when untreated, and fortunately it is equally true also that few diseases lose their contagious nature as rapidly as trachoma when properly treated. It is a very important fact, and one not as universally recognized as it should be, that the observance of some easily carried out hygienic precautions, combined with correct local treatment of the disease, will prevent all danger of contagion to others, and if adopted by every sufferer from trachoma would eradicate the disease in a comparatively short time.

### Treatment of Trachoma.

In regard to treatment, A. A. Ripperger (*American Medicine*) advises, for the milder cases, instillations of protargol, 2%, the solution being given to the patient for application at home, three times a day.

In reference to the fully developed cases of granular lids (trachoma) medical treatment is of little use. For these cases, the use of Knapps' roller forceps (under general anesthesia) accomplishes all that can be expected. The after treatment of their operative treatment is also by protargol, 2%. In these operative cases, with the protargol used afterwards, the children could be sent back to school usually in two or three weeks.

After the disease is diagnosed, the most stringent precautions must be taken to avoid its communication to others. All rags and cotton that have come in contact with the eyes, should be burned at once. All towels, bed-clothing, etc, should be thoroughly boiled. Children should be excluded from school until the disease is no longer in the infectious stage. A thorough examination of the eyes of all immigrants should be made.

(The health officers, whether at New York or Quebec, should not allow trachomatous persons to enter the country.)

### Note on Egyptian Ophthalmia and Trachoma in Egypt.

Beaudry (*Revue gen. d' ophthalmol*) as abstracted in *Eye, Ear and Throat Journal*, concludes as follows:

1. Egyptian Ophthalmia, as a morbid entity, does not exist. The name is improperly given to trachoma complicated by catarrhal or purulent conjunctivitis. 2. Histologically and clinically, trachoma in Egypt is absolutely identical with European trachoma, and is not the result of catarrhal, purulent

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or pseudo-membranous conjunctivitis. 3. Climatic and hygienic conditions in Egypt explain the frequency and diffusion of trachoma and conjunctivitis, in that country. 4. Catarrhal and purulent conjunctivitis, endemic in Egypt, become epidemic in the summer and attack Europeans, but especially the native children, who infect each other. 5. Thanks to hygiene, the number of trachoma cases has materially lessened, and it can no longer be said that nearly all Egyptians are affected. 6. To effectually fight the cause element, contagion, it is necessary to isolate cases of trachoma of the secreting variety. Hospitals, or at least separate wards, exclusively for these patients, are necessary, together with such measures as will better the hygienic and social condition of the poorer class.

### Abscess of the Cerebellum from a Suppurating Labyrinth.

The *Archivio Italiana di Otal Ricol é Laryngol* gives the following case (summarized in the *Journal of Eye, Ear and Throat*):

A patient, 17 years old, had a double mastoid operation performed. When seen there was a double otorrhoea with pain in the left ear and temperature of 40°. The left mastoid was opened and curetted, and the temperature fell to 38.8° for two days; then for about two weeks it remained about 38°, when it suddenly shot up to 40.2° with chills. Examination showed right mastoid inflamed and painful. The mastoid was opened and curetted. A large cholesteatoma was found. The sinus was exposed and punctured, but there was no trombosis. The temperature dropped to 38.5°. Pain persisted, however, and a few days later the patient began to vomit. This condition grew worse, and it was decided to examine the left temporo-sphenoidal lobe in the hope of finding pus. Repeated puncture revealed nothing. The cerebellum was then opened along a line drawn from the posterior occipital protuberance to the base of the mastoid. Puncture revealed a large abscess filled with fetid pus mixed with blood. The abscess extended forward to the petrous portion of the temporal bone The patient died half an hour after the operation. The autopsy showed no extra-dural abscess. There were some adhesions between the pia mater and cerebellum. On opening the cerebellum two pockets were seen—one in front, larger, about the size of a large nut, containing fetid pus; the other behind, filled with pus and blood. The two abscesses did not not communicate with each other. The left internal ear was infiltrated with pus, transformed into a soft and blackish mass. The infection appeared to have entered the cerebellum through the cochlea and internal auditory canal.

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# LARYNGOLOGY AND RHINOLOGY

IN CHARGE OF J. PRICE-BROWN.

## Etiology of Ozena.

Freudenthal (*Laryngoscope*, September, 1903). The writer, in a short paper, gives his theory of the origin of the local affection and of analogous conditions in the accessory cavities, etc. He closes with the following conclusions:

1. Ozena is an atrophy of all the internal walls of the nose due to atmospheric influence, especially to too great dryness of the air.
2. The results of this dryness affect all the internal walls of the nose, neighboring parts, and almost certainly also more distant organs.
3. The bones of the turbinals appear to be affected at the commencement of the disease.
4. to convert this atrophy into ozena a bacillary invasion *en masse* is necessary.
5. This bacillus can increase and multiply only on a suitable soil—*i. e.*, only where atrophic conditions exist.
6. The bacillary invasion must take place early in order to establish ozena.
7. This invasion probably always takes place by direct transmission from the vulva.
8. Sinusites are frequently combined with ozena.
9. Thus, ozena is an autochthonous affection which supervenes on atrophy.

(While some of the writer's conclusions are self-evident, and have long been accepted, others to say the least are puzzling. How can the first and the fourth both be true? The audacity of the seventh, also, is simply marvellous.—*Abstractor.*

## The Import of the Salivary and Nasal Secretions in Hay Fever.

Braden Kyle (*Laryngoscope*, September, 1903), in an important paper read before the Laryngological, Rhinological and Otological Society, gives the results of several years of careful scientific investigation of the chemistry of the salivary and nasal secretions in health and disease. He draws special attention to the fact that the body is a chemical laboratory, having on hand a certain amount of material; and having added to it daily other ingredients through the respiratory and alimentary tracts. Hence, any perverted condition from the normal chemistry may bring about changes giving rise to chemical products, which may be productive of disease in one case and not in another. On this basis the writer explains the various

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diatheses; instancing the precipitation of uric acid in varied forms in certain individuals; while others, under the same dietary and hygienic conditions, are absolutely free from such chemical compounds.

Carrying the same thought to his examination of hay fever cases, he has arrived at the conclusion that in many instances the local irritation of the nasal mucosa is brought about by some chemical change in the constituents of the discharge from the mucous-secreting glands.

The explanation given of the fact that hay fever occurs at certain periods of the year, is that lowered cell-resistance and altered chemistry may be produced by the changes in climate and temperature, incidental to the season of the year, the individual by this means being rendered susceptible to its development. That the chemistry of the secretions has to do with the causal factor of hay fever, Kyle has illustrated in a number of cases by rapidly changing the reaction of the secretion either from acid to alkaline, or from alkaline to acid, or by rendering it neutral; and by this means partially or wholly relieving the attack at the time. Hence, he claims that, while not wholly the cause of this distressing malady, the condition of the nasal and salivary secretions have a very important bearing upon its development.

**Report of three Cases of Retropharyngeal Abscess.**

L. C. Cline (*Laryngoscope*, September, 1903), in a paper read at the annual meeting of the American Lar., Rhin. and Otol. Soc., briefly describes these cases. Two occurred in children, aged respectively two and a half and five and a half years. They were both marked by the characteristic symptoms of swollen neck, head thrown backwards, slightly increased temperature, difficult respiration, inability to swallow and cyanosis. There was also large swelling in the post pharyngo-laryngeal region. Relief was given by vertical incision of the pharyngeal wall, near the medial line, resulting in large evacuations of pus. Both children recovered, but the elder one was attacked by laryngeal edema four days after operation. Tracheotomy became imperative, the tube being worn for five days; subsequent improvement was gradual but sure.

The third case occurred in a man aged 57 years. A long and deep incision was made from below upwards over the median line of the pharynx. The discharge was pus and broken down connective tissue. This afforded relief, but the patient did not improve, dying suddenly two weeks later of general systemic infection. The case was tuberculous as revealed by microscopical examination.

As stated by Cline, the lateral pharyngeal spaces are the

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seats of clusters of lymph nodes which are intimately connected with the lymph vessels of nose, soft palate and pharynx; and as these abscesses in children usually follow some nasal or naso-pharyngeal inflammation, we are justified in assuming that they are of bacterial origin. Koplin has isolated four distinct species of streptococcus, which he says are the micro-organisms present in the pus of these abscesses.

**Treatment of Chronic Hypertrophic Pharyngitis by Scarification.**

Escat (*Archives Internationales de Laryngologie*, July-August, 1903.) While the author advocates the application of solutions of iodine and sprays, together with constitutional treatment, in dealing with ordinary cases; he believes, where there is much interstitial thickening, that free scarification gives the best results. His scarifier consists of eight blades with lancet-shaped points, which can be lengthened or shortened as required.

Before operation an antiseptic gargle is used for five minutes, after which cocaine solution is applied, followed by scarification of the soft palate and uvula longitudinally and transversely. Hemorrhage soon ceases, and the treatment is completed by an application of Ranault's solution of iodine or zinc chloride one in thirty. If dysphagia occurs, sedative gargles are used.

**Operative Treatment of Malignant Disease of the Larynx.**

Sir Felix Semon (*Journal of Laryn., Rhin. and Otol.*, Sept., 1903) gave an address upon this subject before the Laryngological Section of the British Medical Association, at its recent annual meeting. After giving a résumé of the operative treatment of the past, he dwelt forcibly upon thyrotomy, as the ideal method of treatment in dealing with intrinsic cancer of the larynx. He takes this ground, notwithstanding the adverse position assumed by Paul Bruns as late as 1887, when the latter asserts that:—"Attempts to extirpate the disease by means of thyrotomy have shown themselves to be altogether insufficient and useless." This opinion was based upon the history of nineteen cases treated by thyrotomy. Two of the patients died shortly after the operation. In sixteen recurrence and death sooner or later took place: while in the remaining one death occurred twenty-two months after the primary operation, from cancer of the suprarenal glands, although the larynx remained until the end unaffected.

On the other hand, Semon has met with remarkable success in treatment by thyrotomy. His plan is to divide the cartilage into its two lateral halves; and then to dissect out freely all the soft parts around the new growth; making sure that the entire



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mass is removed, even if it involves one or both vocal cords After removal of the malignant growth, the larger upper part of the wound is closed---the lower part being left open for two or three days, until all danger of septic complication is passed.

A summary of his results covers eighteen cases of undoubted malignant disease of the larynx; all were operated upon between June 2, 1901, and July 29, 1902, and not reported until one year later, July 29, 1903. Of these eighteen, "fifteen or 85 per cent. are now alive and well; while the vocal results, with the exception of a few cases in which it was necessary to remove both vocal cords, are surprisingly good." These results the author very justly considers to be "perfectly ideal."

But in order to obtain such results he lays down the following conditions:

1. The operation must be restricted to early stages of intrinsic malignant disease.

2. For this purpose an early diagnosis is indispensable.

3. The operation when performed must be thorough. . . . . A violation of this rule in one single part of the periphery of the new growth may frustrate the entire purpose of the operation.

4. Should it be found after opening the larynx that the disease is more advanced than it appeared from laryngoscopic examination, it is the duty of the operator not to limit his interference to the operation originally contemplated; but to perform partial laryngectomy or any other operation necessary, when the extent and depth of the new growth have been definitely ascertained.

Professor Gluck of Berlin followed Semon in an exhaustive report upon the results of his own method of treating malignant disease of the larynx. He had been impressed with the necessity of finding a satisfactory method of treating cases, in which thyrotomy had from the first been unsuitable, or in which this method was no longer available. In the majority of these cases he had found total excision of the larynx to be the essential feature of treatment; and his efforts in this direction had been followed by the most brilliant results. Out of twenty-seven eases in which he performed this formidable operation, twenty-six recovered. To avoid what is termed "swallowing pneumonia"—one of the main elements of immediate danger in laryngectomy—he in every case completely detached the trachea from the larynx, and sutured it to the skin of the neck, thus securing external respiration, and at the same time preventing the possibility of fluids passing from the throat into the lower air passages.

Professor Gluck also illustrated his operations for removal of portions of the pharynx and constricted segments of the trachea; and incidentally described a method of enabling a

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patient to breathe, when neither tracheal canula nor flexible tube could be introduced. In this case he resected a portion of a rib in the back of the chest, cutting and stitching the pleura to the opening thus made. The portion of lung that prolapsed was then removed; and through this improvised trachea, the patient was enabled to breathe and oxygenate his blood.

**Subglottic Sarcoma Removed Endo-laryngeally with Galvano-Cautery Snare**

J. W. Gleitsmann (*Med. Record*, July, 1902) reported the case. It occurred in a man aged 52 years. Four months before the writer saw him, the patient had an attack of hoarseness. It came on suddenly and continued, accompanied by laryngeal cough. During the period mentioned he had lost twenty-five pounds in weight. On examination a growth was found below the vocal cords, filling the greater part of the tracheal space, and seemingly attached to the anterior surface just below the larynx.

After applying cocaine and adrenalin, the tumor was removed by means of the author's iridoplatinum wire with Schenk's handle and canula. No ill effect followed the operation, and the patient's voice soon began to improve. One month later the stump was removed and the base cauterized. Five months later there had been no return. The pathologist's report corroborated the writer's diagnosis.

(*Note.*—One year subsequent to the reading of the paper, Dr. Gleitsmann reported to the Laryngological Association at Washington that there had been a slight re-formation of the growth, which he yet hoped to be able to remove.—*Abstractor.*)

**Eight Cases of Pressure Pouch of the Esophagus Removed by Operation.**

H. T. Butler (*British Medical Journal*, July 11th, 1903) gives the following as the symptoms of this distressing condition:

1. Return of fragments of undigested food, hours, or even days after it has been taken. 2. Gurgling of gas from the throat, more especially when pressure is made low down upon the left side of the neck. 3. The arrest of a bougie nine inches from the teeth. In some cases, especially when the pouch has attained a large size, wasting may be a marked symptom. Cough may also be noted as occasioned by pressure.

The operation favored is the one recommended by Prof. Bergmann. In order to ascertain that there is no esophageal stricture below the site of the pouch, a bougie should be passed into the stomach at the time of operation. During healing of this wound, a soft tube should be kept *in situ*, from

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mouth to stomach, for the purpose of feeding. The external wound should not be closed but drained by a soft rubber tube. The opening into the esophagus should, however, be stitched up.

The author believes "pressure pouches" to be due to congenital predisposition, and acquired upon that predisposition.

## PEDIATRICS.

IN CHARGE OF ALLEN BAINES AND W. J. GREIG.

**Pathology and Treatment of Chorea.** By D. B. LEES (British Medical Association, Section of Pediatrics).

*Pathology.*—The writer believes that in the majority of cases chorea is rheumatic in origin. His belief is based on the clinical association of the two diseases, and also on the fact that the same bacillus has been found in each.

There appears to be a disorder of the whole brain, possibly of the nervous system in general, yet the disorder is not a distinctive one, and usually ends in recovery. The pathologic changes, if organic, are slight, and it seems probable that they are largely toxemic. But there is something more than toxemia, slight though this something may be. A recent investigation of two fatal cases of chorea by Dr. Reichardt resulted in finding small hemorrhages irregularly scattered, with collections of leucocytes, chiefly mononuclear and dilatation of vessels with perivascular small, celled infiltration in many parts of the brain, also areas of fatty degeneration of nerve fibres. The root fibres and the anterior and lateral horns and the posterior columns of the spinal cord were affected. Cultures from the cerebro-spinal fluid were sterile, but staphylococcus aureus was found in the heart blood. In the second case streptococci were found in the cardiac valves, and a few colonies of staphylococcus albus were obtained from the brain.

Are we to say that chorea is cerebral rheumatism? Yes, if we add the clause, in the great majority of cases. It is possible that other microbes with their toxins may affect the cortical cells as well as the rheumatic diplococcus. It is quite possible also, that sudden fright may so affect the nutrition of the cortical cells in a similar way to the rheumatic diplococcus. The writer claims that every case of chorea, however mild, should be looked on as of rheumatic origin. The difficulty is to prove the presence of rheumatism.

*Treatment.*—Based on the above belief of the pathology, sodium salicylate and an alkali should be given freely. For a

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child 6 to 10 years old, 10 grs. of the former with 20 grs. of the latter should be given. After two or three days this dose should be increased to 15 and 30 grs. respectively, and a few days later to 20 and 40 grs. These doses should be given every two hours during the day, and every three hours at night. Careful watch must be kept for symptoms of salicylate poisoning, especially for a peculiar deep inspiration simulating the air hunger of diabetes.

The pulse failure occurring during the administration of the salicylates is due to the associated cardiac dilatation. Rest in bed and a milk diet are important items in the treatment.

Henry Ashley, of Manchester: Chorea is common in anemic, overgrown girls, in whom there is no evidence of rheumatism, and in these cases the salicylates are not desirable. He was frightened at the large doses recommended by Dr. Lees. He thought from 40 to 60 grs. in twenty-four hours would be enough. Arsenic is of doubtful value, and in large doses injurious. Rest in bed and careful dieting were the most important.

F. J. Poynton, of London, gave in tabulated form the relation, so far as known, of micro-organisms to chorea.

1. Micro-organisms of the streptococcal group have been isolated from rheumatic fever.

2. They have also been isolated from the cerebro-spinal fluid, and from the brain itself in chorea.

3. They have been demonstrated in the pia mater and in the brain.

4. Involuntary movements of a peculiar type have been recorded by Payne and myself, as resulting from intravenous inoculation of rabbits with such micro-organisms.

5. Identical bacteria are found in other rheumatic lesions in man, and are capable of producing the lesions of rheumatism in animals.

6. Chemic leptomeningitis has been noted in chorea by Dana.

7. The lesions found after death in acute chorea, are such as one could explain in the view of an infection.

**Relation of Tuberculosis in Children to Bovine Tuberculosis.** By NATHAN RAW, London (*British Medical Journal*, August 29th, 1903).

He expresses his opinion that man is attacked by two kinds of tubercle: one conveyed by infection from one person to another, the other by receiving into the body bovine bacilli in meat or milk. He believes that bovine tuberculosis is very virulent for children. He believes it is accountable for tabes mesenterica and other abdominal tuberculosis; also for scrofula, or lymph gland tuberculosis; also very probably for tubercular meningitis, and possibly for acute miliary tuberculosis.

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Douglas Reid referred to the rarity of tubercle in India, which he thought was due to the natives always boiling their milk before using it, and also to the exclusion of beef from the diet of a large portion of the population.

George Carpenter mentioned two cases of abdominal tuberculosis in his practice, which had not been fed on cow's milk, but were breast-fed infants. In one of them there was a simple chemic peritonitis, and when the false membrane was stripped off and examined microscopically, many tubercle were found.

W. J. G.

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# Editorials.

## THE ILLNESS OF THE GERMAN EMPEROR.

The medical world was surprised and to some extent shocked to learn recently that a growth had been detected in the larynx of the German Emperor. It was promptly removed and we are told that it was found to be a *benign* polypus with absolutely nothing to justify a suspicion of malignancy.

The opinion thus positively expressed is very satisfactory, but does not remove a certain uneasiness in the minds of thoughtful physicians. We cannot forget that the late Emperor William had also a growth in the larynx which at first showed no signs of malignancy, but in a comparatively short time cancer was found to be present.

In connection with the Emperor Frederick's laryngeal affection it is interesting to note that for some time after Schmidt's declaration that the growth was malignant, Sir Morell Mackenzie maintained that it was benign. Virchow after numerous microscopical examinations, expressed a decided opinion that Mackenzie was right. These facts of course prove nothing as to the condition of the Emperor William's larynx, but they tend to make his subjects and well-wishers outside of Germany more or less uncomfortable.

## JUBILEE OF THE MEDICAL FACULTY OF QUEEN'S UNIVERSITY.

The jubilee year of the medical faculty of Queen's was celebrated by a great gathering in old Convocation Hall, October 14th. Sir Sandford Fleming, Chancellor of the University, presided. Nearly all the medical professors, members of the senate, many trustees, delegates from other universities and guests occupied seats on the platform with the Chancellor and Principal. In the gallery the medical students had a merry time.

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After prayer by the Chaplain, Rev. Dr. McTavish, and a few remarks by the Chancellor upon the great event being commemorated, Dr. Herald, secretary of the medical faculty, gave a brief history of the college since its foundation in 1874.

### DR. HERRIMAN'S ADDRESS

Dr. W. L. Herriman, of Lindsay, Ont., was the chief speaker. So far as known he is the only surviving member of the first graduating class in medicine in 1855. The Doctor was enthusiastically received when he arose to speak. His address partook chiefly of the nature of a reminiscence. The pleasure he felt in revisiting his Alma Mater was not unmixed with sadness, for of all his old and respected teachers not one was left to greet him, the last, Dr. Fife Fowler, having passed to rest a little over two months ago.

Dr. Herriman referred to the cause which led eight students attending Trinity College, Toronto, to drift to Kingston in the third year of their studies, 1854. They refused to leave their respective mother churches for the Anglican communion in order to obtain a degree. Queen's took them in and graduated them later without any religious test. Continuing, the speaker contrasted the present efficient and improved facilities with the conditions fifty years ago. There had been a tremenduous development since then, and if he had not been a continuous student he would be away in the background.

In the evening the delegates and invited guests were received by the Chancellor, Sir Sandford Fleming, and presented to the Principal and Mrs. Gordon in the library in the old Arts building. At nine o'clock they were welcomed on behalf of the University by Hon. Justice Maclennan, Chairman of the Board of Trustees. Short replies to the address of welcome were given by delegates. Afterwards Mrs. Gordon held a reception at her beautiful college residence.

The three oldest students of arts, theology and medical faculties of Queen's were in attendance at the ceremonies, viz., Rev. Dr. Wardrobe, of Guelph, Dr. Herriman, Lindsay, and Hon. Dr. Sullivan, Kingston. Dr. Wardrobe entered the first Arts class on the opening of Queen's in 1842. Dr. Herriman and Dr. Sullivan were on the roll of the first classes of the medical college in 1854.

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## KING EDWARD'S SANITARIUM FOR CONSUMPTIVES.

One of King Edward's most marked characteristics is the great interest he takes in the poor and afflicted. This is especially shown by his work in connection with the "King's Hospital Fund" and his "Sanitarium for Consumptives" which is now being erected, the foundation stone having been laid by his Majesty, October 3rd. It will be remembered by our readers that Sir Ernest Cassel some time ago placed at the disposal of the King a sum of money for any benevolent purpose he chose.

His Majesty decided on the erection of a hospital for consumptives which will be open to patients of all classes above the ranks of the very poor, who are already fairly well provided for. It will be situated among the pine woods on a hill near Haselmere, in one of the loveliest parts of Surrey. We are told that it will be the Davos Platz of England, and the open air treatment will be the chief feature in the cure of the patients. The King when laying the corner stone remarked that the Sanitarium would be of far reaching importance and value in teaching the crowded of the British people the need, too generally neglected, of fresh air and ventilation in their homes.

## ENGINEER BROWN.

Belleville, July 20.—Yesterday afternoon Engineer Brown of this city prevented an outrage by two tramps three miles east of Kingston. He was coming west with his train, and, while looking out of his cab window saw a young lady a short distance from the track struggling in the hands of a couple of rough-looking men. He at once stopped the train, and with his fireman, started to the rescue. The tramps made for the woods and disappeared. The young lady was almost exhausted. She said she was walking with a gentleman friend when the two tramps accosted them. They overpowered her escort and attempted to drag her to the woods. They were only frustrated by the timely arrival of the train men. Her escort had been so badly ill-treated as to be unable to give any assistance.—*Press Dispatch.*

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Engineer Brown has set his fellow citizens a good example. Just as long as we suffer tramps to infest our country, city, or town, just so long will such things be.

There were two horrid murders committed in Ontario not far from the time that Engineer Brown stopped his train. This is our business and we had better take an interest in it and see it through, as the engineer did.

Mr. Benjamin C. Marsh, of Philadelphia, investigated the matter for himself in that city last spring. The Wayfarer's Lodge in Philadelphia had 110 empty beds. It is avoided because a work test is applied to those who are able to work. Mr. Marsh heard a "five-cent flopper" (i.e., a man allowed to sleep on the floor of a cheap lodging house for five cents) remark, "It's a disgrace to work in Philadelphia when you can get along so easily without doing a stroke." Mr. Marsh himself begged for an hour, as a test, and was rewarded by $1.15 cash.

Laziness and beggary are encouraged by the "religious" and other lodging houses where the unwashed, having received tickets from the "charitable" (which they may exchange also for drinks at certain saloons), do dwell in thousands.

In Baltimore recenty the blind, maimed, and otherwise effective beggars were gathered in by the police and were suddenly transformed, on close examination into sound, whole and seeing persons.

If any will not work, neither should he eat, and if we had fewer tramps we would have fewer murders and assaults.

## NOTES.

### Manitoba Medical College Opens.

This College began its twenty-first consecutive session September 21 with the largest attendance in its history. There are over forty in the freshman class. The following changes in the staff have been made: Dr. J. O. Todd has been elected to the chair of anatomy in succession to the late Dr. Neilson. Dr. James McKenty and Dr James Pullar have been appointed assistant demonstrators in anatomy. Dr. W. L. Watt will conduct the practical and physiological chemistry, and Mr. J. S. Pierce will teach the organic and inorganic chemistry.

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**Smallpox in New Brunswick.**

Fourteen cases of smallpox are reported in Madawasha County, N.B.

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**Typhoid Fever in Manitoba.**

This disease has been very prevalent this autumn in Manitoba and Winnipeg. In Winnipeg one of the Industrial Exhibition buildings has been converted into a hospital for 35 patients.

It is expected that a four story addition to the St. Boniface Hospital, Winnipeg, will shortly be built at a cost of $100.000.

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**Five-year Medical Course in Quebec.**

The Quebec Board of Physicians and Surgeons at a recent meeting decided to lengthen the medical course from four to five years, also to request the Legislature to repeal that section of the by-laws of the Quebec council which permitted men having British licenses to register and practice in the Province of Quebec without having to undergo any further examination.

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**Toronto Dispensary.**

Last year about 13,000 patients were treated at the Toronto Dispensary. The equipment and accommodation of the old building are insufficient and an appeal has been made for funds for the erection of a new building next spring.

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**A New Hospital for Epileptics.**

Work has begun on the new hospital for epileptics at Woodstock, Ont. It is expected that the buildings will be ready for occupation August 1, 1904.

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# Personals.

Dr. H. McLean (Tor. '03) is at Cairo, Ont.

Dr. W. R. Mahood (Tor. '03) is practising in Sioux City, Iowa.

Dr. J. H. Hamilton (Tor. '03) has commenced practice in Nelson, B.C.

Dr. Norman Allen, of Toronto, paid a visit to New York, November 14th.

Dr. Graham Chambers, of Toronto, visited New York, November 17th.

Dr. E. Clouse, of Toronto, returned from Northern Ontario, November 14th.

Dr. J. Rutherford, of Chatham, spent a few days in Toronto early in November.

Dr. E. K. Cullen (Tor. '03) is a house surgeon at Johns Hopkins Hospital, Baltimore.

Dr. C. M. Foster, of Toronto, has removed from Yonge Street to 34 Roxborough Street West.

Dr. T. Shaw Webster, of Toronto, has moved into his new residence, corner of Spadina Avenue and Wilcox Street.

Sir Michael Foster having resigned the professorship of physiology at Cambridge, the choice of a successor has fallen upon John Newport Langley, F.R.S., Sc.D.

Dr. Herbert C. Featherston, 112 Bedford Road, Toronto, has returned from Edinburgh, where he has been taking a post-graduate course, receiving the L.R.C.P. & S.

Dr. W. T. Williams (Trin. '03) having taken the double qualification of Glasgow and Edinburgh has gone to London, where he is doing post-graduate work in the hospitals.

Four beds in the Roosevelt Hospital, New York, have been endowed in honor of Dr. Abraham Jacobi, formerly Professor of Pediatrics at the College of Physicians and Surgeons.

Professor Llewellyn F. Barker, at the head of the department of anatomy at the University of Chicago, has gone abroad for a year to study the methods of research and the equipment of the medical institutions of Europe. The trip has for its object the perfection of the plans for the extension of Rush Medical College. In the absence of Professor Barker the department of anatomy will be in charge of Assistant Professor Bensley.

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Dr. Chas. R. Dickson attended the thirteenth annual meeting of the American Electro-Therapeutic Association at Atlantic City, New Jersey, and then spent a week in New York before returning to Toronto.

QUEEN'S MEDICAL FACULTY, KINGSTON.—Dr. J. C. Connell has been made Dean, and Dr. W. T. Connell, Secretary, in the place of Dr. Herald, resigned. Dr. A. R. B. Williamson has been appointed Lecturer in Medical Jurisprudence and Toxicology.

# Marriages.

At Hillcrest, Dr. D. R. Dunlop to Miss Janet Cook.

At Toronto, Dr. W. E. Struthers to Miss Jennie Brown.

At Galt, July 21st, Dr. W. Scott Dakin to Miss Jessie McKay.

At Victor, Colorado, Dr. Norman C. Williams to Miss Claribel Lorens.

At Niagara Falls South, July 15th, Dr. Frank McTavish to Miss Grace Brown.

At Brockville, October 7th, Dr. E. B. Moles, of Arnprior, to Miss Alice Gilmour.

At Thamesford, September 2nd, Dr. J. Paterson Keith to Miss Cora E. MacDonnell.

At St. Thomas on September 16th, Dr. Donald A. Cameron, of Dutton, to Miss McLean.

On September 30th, at Toronto, Dr. Jas. M. McCallum to Miss Cornelia S. McMaster.

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# Obituary.

## DR. ROBERT ABERDEIN.

Dr. Robert Aberdein (Tor. '67) died at Syracuse, N.Y., October 18th.

## DR. GILBERT. C. FIELD.

Dr. Gilbert C. Field, of Woodstock, died October 14th.

## DR. DAVID S. OLIPHANT.

Dr. David S. Oliphant, of Toronto, died November 13th, aged 88.

## HON. DR. LANDERKIN.

Hon. Dr. Landerkin, of Hanover, died October 4th, aged 64. He was well known, both as a physician and a politician. He was a member of the House of Commons for many years, and was appointed a member of the Senate in February, 1901. He was an exceedingly popular and lovable man.

## DR. W. G. MONTGOMERY.

Dr. W. G. Montgomery, of Minden, died September 8th of phthisis, aged 29.

## MR. GEORGE LAWSON.

Mr. George Lawson, Consulting Surgeon, Royal Ophthalmic Hospital, Moorfields and Middlesex Hospital, London, and Surgeon-Oculist to Her late Majesty Queen Victoria, died October 12th, aged 73.

## MR. WILLIAM JOHN WALSHAM.

Mr. William John Walsham, Surgeon to St. Bartholomew's Hospital, and formerly lecturer on surgery in the Medical College of St. Bartholomew's Hospital, died October 5th, aged 56.

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# Book Reviews.

**Nose and Throat Work for the General Practitioner.** By GEORGE L. RICHARDS, M. D., Fellow American Laryngological, Rhinological and Otological Society; Fellow American Otological Society; Associate Editor Annals of Otology, Laryngology and Rhinology; Otologist and Laryngologist Fall River Union Hospital, Fall River. Mass. Price, $2.00. Published by International Journal of Surgery Co., N.Y. Canadian agents: Chandler & Massey, Limited, Toronto.

This book derives especial importance from the fact that the diseases described therein constitute so large a share of the physician's daily routine of practice. It has been the author's aim to teach the practitioner how to diagnose these cases and how to treat them successfully and according to modern methods. With this object in view every effort has been made to describe the treatment in such detail as to leave no point obscure, and to simplify the technics as much as possible so as to avoid the necessity of an elaborate and expensive armamentarium. No space is occupied with theory, and the information given is based for the most part upon the author's own extensive clinical experience in diseases of the nose and throat. For the sake of completeness a number of conditions are discussed which properly belong to the specialist, but with these few exceptions the diseases described are such as can be treated by the general practitioner. A noteworthy feature of this work is the large number and excellence of the illustrations.

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**A Text-Book of Diseases of Women.** By BARTON COOKE HIRST, M. D., Professor of Obstetrics in the University of Pennsylvania; Gynecologist, to the Howard, the Orthopedic and the Philadelphia Hospitals. Handsome octavo volume of 675 pages, sumptuously illustrated with some 650 mostly original illustrations, many in colors. Philadelphia, New York, London; W. B. Saunders & Company, 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net. Canadian agents, J. A. Carveth & Company, Toronto, Ont.

This latest work of Dr. Hirst's is on the same line as his "Text-Book of Obstetrics." As would be expected from a practical teacher, diagnosis and treatment have been given particular attention. The palliative treatment, as well as the radically operative, is fully described, enabling the general practitioner to treat many of his own patients without referring them to a specialist. A feature which specially impressed us is the thorough manner in which the author has treated modern technic of gynecic surgery. An entire section is devoted to a full description of all modern gynecologic operations, illustrated and elucidated by numerous photographs taken especially for this work. The author's training in the sub-

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the Pancreas having been created since the last edition. A number of the old illustrations have been replaced by better ones, and, in addition, there have been added a number entirely new. In fact, we know of no single volume work that is even its equal in the expounding of the advanced and practical principles of modern surgery.

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**Nervous and Mental Diseases.** By ARCHIBALD CHURCH, M. D., Professor of Nervous and Mental Diseases and head of Neurological Department, Northwestern University Medical School; and FREDERICK PETERSON, M. D., President New York State Commissioner in Lunacy; Chief of Clinic, Department of Nervous Diseases, College of Physicians and Surgeons, New York. Fourth Edition, Thoroughly Revised and Enlarged. Handsome octavo volume of 922 pages, with 338 illustrations. Philadelphia, New York. London: W. B. Saunders & Company, 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

This is the fourth edition of this excellent work in as many years. The revision, indeed, has been thorough, all the latest knowledge on the subjects having been incorporated, including the recent work regarding the healing of nerves. The subject of Intermittent Limping, now definitely known to depend upon a lesion of the posterior root ganglia, and Herpes Zoster have been given a section each. Another addition is the discussion of that form of epilepsy marked by myoclonus, furnishing the so-called Combination Disease. Further importance has been given to symptomatology and symptomatic disturbances, and the diagnostic value of astereagnosis and of Kernig's Sign has been elaborated.

We also find that there have been added a large number of new and excellent illustrations. A useful addition to the portion of the book devoted to Insanity is a new section consisting of a critical review of the German Schools which have recently made such important advances in psychiatry.

In many ways this work will be found of unusual assistance, not only to the specialist, but also to the student and general practitioner.

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**A Text Book Upon the Pathogenic Bacteria.** For students of medicine and physicians. By JOSEPH MCFARLAND, M. D., Professor of Pathology and Bacteriology in the Medico-Chirurgical College, Philadelphia; Pathologist to the Philadelphia Hospital and to the Medico-Chirurgical Hospital, Philadelphia. Handsome octavo volume of 629 pages, fully illustrated, a number in colors. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $3.50 net. Canadian agents, J. A. Carveth & Co., Toronto, Ont.

This work gives a concise description of the technical procedures requisite in the study of bacteriology, a brief account of the life histories of the important pathogenic bacteria, and

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sufficient description of the pathologic lesions accompanying micro-organismal invasions to give an idea of the origin of symptoms and the causes of death. Although but a short time has elapsed since the appearance of the previous edition, such rapid strides have been made in the subject of bacteriology, especially in its relation to pathology, that the author deemed it necessary to rewrite the work entirely. All the old matter has been eliminated, much new matter is in evidence, and, in fact, the subjects treated have been brought precisely down to date. What impressed us most were the chapters upon Infection and Immunity. All the new facts recently added to our knowledge of these subjects can here be found. The value of the work as a book of reference has been materially increased by the introduction of a large number of references to bacteriologic literature. These have been thoughtfully chosen, and, in nearly all cases, give the sources of the original descriptions of the micro-organisms treated, and the important methods described. Another valuable addition is a bibliographic index containing the names of over 600 authors. Altogether the work in its new edition is very commendable, and practitioners and students will find it of unusual value.

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**A Text-Book of Clinical Anatomy.** For Students and Practitioners. By DANIEL N. EISENDRATH, A.B., M.D., Clinical Professor of Anatomy in the Medical Department of the University of Illinois (College of Physicians and Surgeons); Attending Surgeon to the Cook County Hospital, Chicago, etc. Handsome octavo of 515 pages, beautifully illustrated with 153 illustrations, a number in colors. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The subject of anatomy, and especially clinical anatomy, is so closely allied to practical medicine and surgery that it is impossible for a physician or surgeon to practice his profession successfully unless he has an intimate knowledge of the human structure. In his preface the author states that the primary object of his work is to serve as a bridge for both the practitioner and student from descriptive anatomy, as it is usually taught in the first two years of a medical course, to its daily application at the bedside, in the clinic, or in the operating room. The entire subject is discussed with a thoroughness and precision that spring from experience. The method of illustrating the subject is novel, special attention having been given to surface anatomy. The illustrations themselves are the result of a great deal of painstaking study, outlines having been marked upon a normal artist model, and then photographed. They are reproduced in the highest style of art, and show far better than any we have seen the relation of anatomical structures from a clinical standpoint, presenting to the practitioner a picture as met at the bedside, with the skin covering the tissue.

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**A Text-Book of Obstetrics.** By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania. Handsome octavo, 900 pages, with 746 illustrations, 39 of them in colors. Philadelphia, New York, London: W. B. Saunders & Company, 1903. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

In revising his work for this edition, the author has spared no pains to make the book reflect the latest knowledge on the subject. He has even described and illustrated the method of using the "Neumann-Ehrenfest Kliseometer." More attention has been given than in the previous editions to the diseases of the genital organs associated with or following childbirth, and this we think, is an excellent improvement. Many of the old illustrations have been replaced by better ones, and there have been added besides a number entirely new. The work treats the subject from a clinical standpoint, the author ever keeping in mind that the aim of all medical literature is to cure.

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**A Text-Book of Obstetrics.** By J. CLARENCE WEBSTER, M.D. (Edin.), Professor of Obstetrics and Gynecology, Rush Medical College, Chicago. Philadelphia, New York, London: W. B. Saunders & Company, 1903. $5.00 net. Toronto: J. Carveth & Co.

Although so many books on Obstetrics have recently appeared from the medical press, or are in preparation, the importance of the subject and the fact that observations and investigations are always being made in it, as well as the fact that there is no entirely satisfactory book for students in Obstetrics, may perhaps be found to justify them all.

Dr. Webster's book is a good one, excellently printed and illustrated and devoting much attention to Anatomy, Physiology and Histology. We think more space might have been given to Normal Labour and to the discussion of what may be called ordinary difficulties, but the book is on the whole a valuable one, and a decided addition to the physician's library.

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**Anatomy Applied to Medicine and Surgery.** By D. E. MUNDELL, B.A., M.D., Professor of Applied Anatomy, Faculty of Medicine, Queen's University; ex-Examiner Practice of Medicine, Ontario Medical Council; Surgeon to Kingston General Hospital, British Whig, Kingston.

Although entering a field already extensively covered, Dr Mundell's warrant for another work on the subject is the lucid way in which he takes the matter in hand, and the very practical manner in which anatomical knowledge is applied. It is necessary for the modern practitioner of medicine and surgery to be something more than an expert dissector, who can tag a name on each structure his scalpel reveals. He must be ready at all times to put his knowledge into practical use, and it is to the practical side of the question that the author devotes the most of his attention. Each subject is introduced by a rapid

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review of the anatomy of the part under discussion, followed by the application of these facts to medicine and surgery.

The book is a credit to both author and University in which he teaches, and is a most useful addition to either a student's or a physician's library.

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**Squint: Its Causes, Pathology and Treatment.** By CLAUD NORTH, F. R. C. S. London: John Bale, Sons & Danielson, Limited, 1903.

There are many features about this little book of some two hundred pages, which stamp it as belonging to the better class of works.

The author's style is pleasing, concise and definite. He has also investigated for himself, and therefore one does not find all the definitions which are handed on from generation unto generation of text books repeated here. Indeed, many of the author's statements will be quite new to many. The great importance of the "fusion faculty" and the part it plays in the causation of converging squint is quite original. Also very interesting observations are made upon the harmful delay in treating squint—allowing the child to grow out of the squint.

Again, in the treatment of convergent squint the author has devised an instrument for training the "fusion faculty." This instrument he has named the Amblyoscope.

Atropine in the *fixing-eye* only, and the value of advancing the external rectus in anatomy of the internal rectus are dealt with, and the book closes with a short account of the ordinary operations on the external muscles of the eye.

Altogether, the book is most pleasing and reflects great credit upon the author for his care and originality, and upon the publishers for the very artistic and substantial way in which the book is gotten up.

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**Progressive Medicine.**—A quarterly digest of Advances, Discoveries and Improvements in the medical and surgical sciences. Edited by HOBART AMORY HARE, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc., assisted by H. R. M. LANDIS, M.D. Volume III., September 1903. Diseases of the Thorax and its Viscera, including the Heart, Lungs, and Blood-vessels, Dermatology and Syphilis, Diseases of the Nervous System and Obstetrics. Philadelphia and New York: Lee Brothers & Co. 1903.

This number of the most valuable series issued quarterly is quite as useful and interesting as any which have preceded it, and as has been so frequently stated, the advanced physician should secure each number immediately on its publication. In this volume Dr. Wm. Ewart deals with Diseases of the Thorax and its Viscera; Dr. Wm. S. Gottheil has an able version on Dermatology and Syphilis. Diseases of the Nervous System are carefully considered by Dr. William G. Spiller, and Obstetrics by Dr. Richard C. Norris.

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**A Practical Treatise on Materia Medica and Therapeutics.** By ROBERT BARTHLOW, M.A., M.D., LL.D., Professor Emeritus of Materia Medica, General Therapeutics and Hygiene in the Jefferson Medical College of Philadelphia; formerly Professor of Materia Medica and Therapeutics, and of the Practice of Medicine in the Medical College of Ohio; Fellow of the College of Physicians, etc., etc. Eleventh edition. Revised and enlarged. New York and London: D. Appleton. 1903. 866 pages.

When a book has reached its eleventh edition, the stamp of public approval is so clear that little need be said of its merits. For a generation Dr. Barthlow's work has been a standard text-book, and the author's latest revision keeps it strictly in line with the medical advancement of the last few years. In the tenth edition there were two important changes—the long list of references to literature were struck out, and a chapter on prescription writing was added. Both these features are retained in the new edition, which strives more than ever to make pharmacology scientific, although of necessity still clinging to a large amount of empirical knowledge. Fully alive to the needs of the general practitioner, the veteran author has embodied all remedies of any worth, together with a complete statement of their uses, whether rational or empiric. Throughout the whole book there is a refreshing conservatism, characteristic of a careful writer, which makes one feel that the facts given are trustworthy. Not the least merit of the book is the handy index—a *sine qua non* to a busy man.

On the whole this is one of the few single volume works on therapeutics that can be recommended to a place on every doctor's shelves. We hope that Dr. Barthlow may see several more editions of his valuable book.

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**The American Illustrated Medical Dictionary.** For Practitioners and Students. A complete Dictionary of the Terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc., etc. By W. A. NEWMAN DORLAND, A.M., M.D., editor of the "American Pocket Medical Dictionary." Handsome large octavo, nearly 800 pages, bound in full flexible leather. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Price, $4.50 net; with thumb index, $5.00 net. Canadian Agents: J. A. Carveth & Co., Toronto.

The rapid exhaustion of two large editions cannot but be a gratifying proof to the editor and publishers that this excellent work meets the varied needs of physicians and students better than any other dictionary on the market.

In this the third edition several hundreds of new terms that have been added to the vocabulary of medical sciences have been incorporated and clearly defined. The entire work, moreover, has evidently been subjected to a careful revision, and

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many of the tables, notably those of Acids, Bacteria, Stains, Tests, Methods of Treatment, etc., have been amplified, and their practical value greatly increased. It is only by such constant and careful revision that a medical dictionary can hope to reflect the progress of medical science, and the usefulness of this work by this present revision has been very largely extended.

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**A Manual of the Practice of Medicine.** By A. A. STEVENS, A.M., M.D., Professor of Pathology in the Woman's Medical College of Pennsylvania; Lecturer on Physical Diagnosis in the University of Pennsylvania; Physician to the Episcopal Hospital and to St. Agnes' Hospital; Fellow of the College of Physicians of Philadelphia, etc. Sixth Edition. Thoroughly Revised, Enlarged, and Reset. Handsome Post-octavo of 556 pages, illustrated. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Flexible Leather, $2.25 net. Canadian Agents: J. A. Carveth & Co., Limited, 413 Parliament Street, Toronto.

The popularity of this manual on the Practice of Medicine can be attested for by its numerous editions. The work covers completely the ground gone over by the student, especial stress being laid on diagnosis, differential diagnosis, and treatment. Each disease is treated in a concise, clear, and scientific manner, and the reader can not fail to grasp the author's meaning. Many articles, notably those on Diseases of the Digestive System, Diseases of the Myocardium, Malaria, Diseases of the Blood, Gout, Diseases of the Spinal Cord and Larynx, have been entirely rewritten, thus bringing the work absolutely abreast the times. It is one of the best small manuals for students that we have seen.

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**A Thesaurus of Medical Words and Phrases.** By WILFRED M. BARTON, M.D., Assistant to Professor of Materia Medica and Therapeutics, and Lecturer on Pharmacy, Georgetown University, Washington, D. C., and WALTER A. WELLS, M.D., Demonstrator of Laryngology and Rhinology, Georgetown University, Washington, D. C. Handsome octavo of 534 pages. Philadelphia, New York, London: W. B. Saunders & Company. 1903. Flexible Leather, $2.50 net; with thumb index, $3.00 net. Canadian Agents: J. A. Carveth & Co., Limited, Toronto.

This work is the only Medical Thesaurus ever published. It performs for medical literature the same services which Roget's work has done for literature in general; that is, instead of, as an ordinary dictionary does, supplying the meaning to given words, it reverses the process, and when the meaning or idea is in the mind, it endeavors to supply the fitting term or phrase to express that idea. To obviate constant reference to a lexicon to discover the meaning of terms, brief definitions have been given before each word. In the matter of synonyms of technical words the authors have performed for medical science a service never before attempted. Writers and speakers desiring to avoid unpleasant repetition of words will find this

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feature of the work of invaluable service. Indeed, this Thesaurus of medical terms and phrases will be found of inestimable value to all persons who are called upon to state or explain any subject in the technical language of medicine.

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**Physician's Pocket Account Book.** By Dr. J. J. TAYLOR. Published by the Medical Council, 4105 Walnut Street, Philadelphia.

This handy little book combines day-book and ledger in the one volume, and is so arranged that only one entry is necessary. It compels even the most careless doctor to make his entry so that it could be produced as legal evidence if necessary. The size is the very best for the pocket, and the book as a whole is one greatly to be recommended for the busy man.

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**Manual of the Diseases of the Eye, for Students and General Practitioners.** By CHARLES H. MAY, M. D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbia University, New York, 1901-1903: Ophthalmic Surgeon to the French Hospital, New York; Consulting Ophthalmologist to the Red Cross Hospital, New York; Adjunct Ophthalmic Surgeon to Mt. Sinai Hospital, New York, &c. Third edition, revised, with 275 original illustrations, including 16 plates, with 36 colored figures. New York: Wm. Wood & Co., 1903.

The first edition of this book appeared in 1900. An examination of its contents revealed its value, and a most favorable review appeared in this journal at the time. That the book was well received by the medical profession is shown by the fact that a second edition was called for in 1901. This issue was exhausted in three weeks, and two reprints were published.

Now a third edition is demanded. For this edition every page has been examined, alterations made where necessary, some new plates added, and the book brought thoroughly up-to-date. The appearance of this third edition will still further enhance its popularity. It is one of the very best of the smaller works on this subject. J. T. D.

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**A Text-Book of Pathology.** By ALFRED STENGEL, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Octavo volume of 933 pages, with 394 text-illustrations, many in colors, and 7 full-page colored plates. Philadelphia, New York, London: W. B. Saunders & Co., 1903, Cloth, $5.00 net; sheep or half morocco, $6.00 net. Canadian Agents, J. A. Carveth & Co., Toronto.

This work is characterized by the thoroughly practical way in which pathology and clinical medicine go hand in hand. The new edition contains all the latest advances of pathology, and has a useful appendix on technic, besides many new illustrations. The book is one of the best one-volume works that has been published, and is especially suited to students.

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## AGLACTIA OR DEFECTIVE LACTATION.

The latest researches of medical science regarding the soluble ferments of mother's milk have forcibly brought before the profession the great and important question of the feeding of the child by its mother.

It has always been, and will always remain, an undisputed fact that the proper and only really satisfactory food for the infant is that which is supplied to it by nature, and for the complete assimilation of which the organs of its digestive tract are especially adapted. It is undoubtedly regarded as a misfortune of greater or less importance, according to the debility or strength of the child, whenever the physician has to resort to artificial methods in the alimentation of a young baby. Observation has demonstrated that no substitute for the mother's milk has fulfilled its task, and, that the mortality figures amongst infants fed by artificial means, have not sensibly diminished. Consequently it is self-evident that there is some great gap, some physiological difference between the two methods of feeding, that cannot be satisfactorily bridged. It has been demonstrated beyond reasonable doubt that this gap is caused by the deficiency of the artificial substitute in the blood-enzymes, the soluble ferments, which have so important a bearing on the powers of assimilation of the infant.

Admitting this fact, many physicians are making the mother more and more the principal object of that attention, which the child has hitherto almost exclusively monopolized.

In summing up the general facts of the case, it is found that complete aglactia is very rarely seen, and is usually hereditary. Milk is present in the mammary gland of almost all primiparæ after parturition. Its appearance may be delayed, but not indefinitely, and, when the quantity is insufficient, this is caused by a disturbance of the general health. Anemia causes the largest number of cases of delayed and insufficient lactation among primiparæ. Lack of self-confidence makes many a young mother nothing more than a dry nurse. Then follows a worse feature, for, in common, with the other organs of the body, the mammary gland is developed by exercise. The primipara who imagines that she is unable to feed her child and who does not feed it, renders lactation impossible after her subsequent confinements. The habit of some women of weaning their children at too tender an age has a similar effect. The inertia of the gland leads to its atrophy.

The following quotation is of interest in this connection: "Acute affections, specific diseases and frequent miscarriages

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may diminish lactation and lead to a disappearance of the milk, but these are accidental causes and their injurious influence is not always irreparable. When the milk is poor in quality, ascertain whether it is the consequence of an accidental cause, such as overwork, premature menstruation, intercurrent disease, a delicate or a highly nervous constitution, or a constitutional cause. If it is the latter almost nothing can be done; but, if it be one of the accidental, the secretion may be restored in a great many cases to a normal standard. In the majority of cases there is a general deficiency in the performance of the metabolic process due to general physical apathy. For this condition the patient should be provided with nutritious food and strychnia, which is particularly effective."—*C. Sumner Witherstine in Analytical Cyclopædia.*

"Beer, porter and other malt liquors, especially alcoholic beverages, are more hurtful than beneficial, and any improvement that may show itself is due mainly to the confidence in the beverage taken. The quantity of milk may be increased, but its quality is compromised. It encourages the production of fat at the expense of the albumen."—*C. Sumner Witherstine in Lact. At.*

"Another error is the belief that beef tea and chicken broth are good for nursing mothers."—*Argel Money in Australian Medical Gazette.*

An abundant supply of the materials which go to form the milk, is necessary for the mother. The most important of these materials is the albumen. The mammary gland extracts this albumen from the blood serum. It cannot take it from any other source. The albumen which the gland withdraws from the blood is the globulin which the serum holds in solution. The higher the tenor of the blood in globulin, the more abundantly will it appear in the milk.

A physiological fact, not generally known, is that the milk-albumen is only a transformation of the globulin of the serum. Several German physiologists have advanced this theory. Moreover, Mathias Duval, the eminent French physiologist, is strongly of the opinion that the albumen of the milk is the albumen of the blood transformed, and he adduces in proof of this that in the first milk, or colostrum, the milk albumen is not completely formed. (Mathias Duval, *Cours de Physiologie,* 1887.)

In order to supply the blood with the normal tenor in globulin, it is not necessary to devote every means to supplying the nursing mother with an excessive quantity of food, particularly, as, in many cases this is difficult, owing to lack of appetite or defective digestion. The use of lacto-globulin enables the physician to give the mother the most efficient aid that can be used. This albumen may be considered as having a specific

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action on the mammary gland. Moreover, its high value in soluble phosphates has a general tonic effect on the system, and the quantity of natural amylopsin and trypsin ferments which it contains, have an important effect on the digestion of the mother and a tendency to increase the blood-enzymes in her milk. It brings on an abundant flow of milk and renders nursing an easy task. One teaspoonful dissolved in water, taken three or four times per diem, gives to the blood-serum its proper quota of globulin which the mammary gland converts into milk-globulin.

OBSERVATIONS.

1. Mrs. M., aged 32, affected with nervous dyspepsia, has had five children, of which four are living. First child died at the age of four months; nursing for this child was difficult and insufficient; nursing for the three following was difficult, and artificial feeding had to be resorted to in order to complete the nourishment. With the fifth child Mrs. M. commenced the use of lacto-globulin one month after her confinement: one teaspoonful dissolved in water, three times a day. The nursing became and remained very abundant. The child took nothing but the breast and had better health than any of the other children. It was the only child with which she had no trouble.

2. Mrs. L., aged 30, three children, underweight, the third child fed at the breast for three months. At this time it commenced to vomit the breast milk and was troubled with diarrhea; the child's condition became alarming. The physician in charge of the case, believing the symptoms due to the poor quality of the mother's milk, lacto-globulin was administered to the mother: one teaspoonful dissolved in water, four times a day. The child retained the breast milk, the diarrhea gradually disappeared and the child developed well.

3. Mrs. A. L., aged 28, three children, health fair, though not strong. The third child, aged two months, remained thin and weak and did not grow well; cried very much. Mother placed on lacto-globulin: one teaspoonful dissolved in water, five times per day. The child improved rapidly, stopped crying, and has been doing well since.

---

**Bacteriological Chart in Colors.** For Free Distribution. New York: M. J. Breitenbach & Co. 1903.

This chart, 17 by 36 inches in size, and intended to hang on the wall, shows in sixty colored plates the various pathogenic organisms. The chart is not intended to be scientifically exact and true to nature in every case, but rather to call attention to the general characteristics of the organisms illustrated. The chart is one that will prove of interest and value to the general practitioner.

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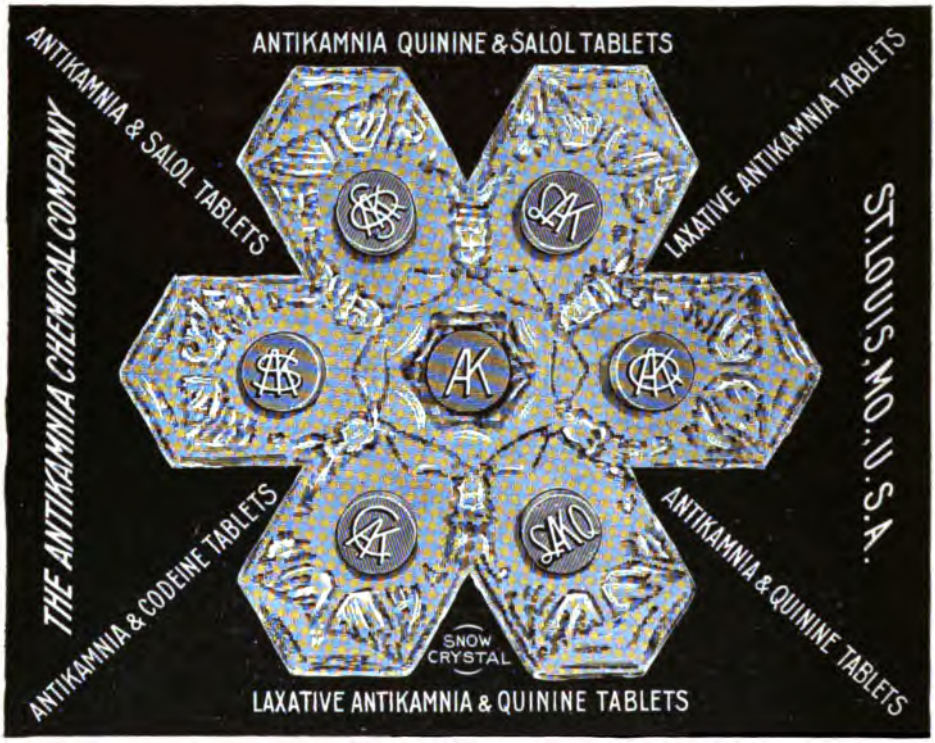


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SOME

# Fallacies of Early Infant Feeding

IT is commonly supposed that a young infant may be fed on any mixture of cow's milk with or without one of the many advertised farinaceous foods. Physiological research tells us that not until the child is nearly six months old is it capable of digesting starchy food, and that during these early months it has little power to assimilate the casein of cow's milk. The practical truth of this statement is shown in the terrible mortality of young infants from diarrhea and disorders of the alimentary canal—conditions due alone in the majority of instances to irritating indigestible food and bacterial contamination.

## IMPROPER FOODS IN COMMON USE DURING THE FIRST SIX MONTHS

### Condensed Milks.

Which are deficient in fat and soluble albumen, but contain an excess of sugar, and that not milk-sugar. This class of foods is therefore not only highly indigestible, but also below the normal in fat-forming constituents.

### Farinaceous Foods.

Containing unaltered starch are inadmissible, as the infant is given work to do which it cannot perform; and the additional fact of these necessarily being made with unaltered cow's milk renders them still more indigestible.

### Cow's Milk and Barley Water Mixture.

Is perhaps the least harmful, but is not a perfect food in that it contains too much casein, too little fat and albumen, and generally swarms with bacteria. Its reaction, moreover, is uncertain, and, though the presence of the barley-water mitigates the formation of large and indigestible curds, it is itself by no means suitable for the infant economy.

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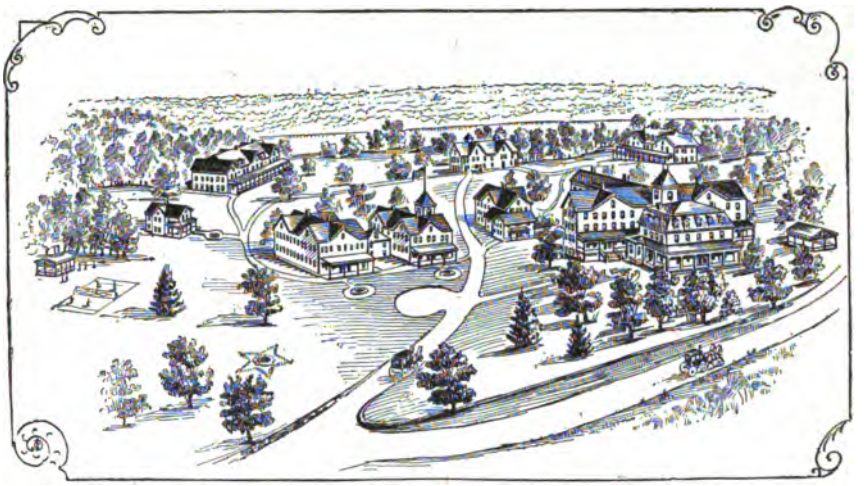

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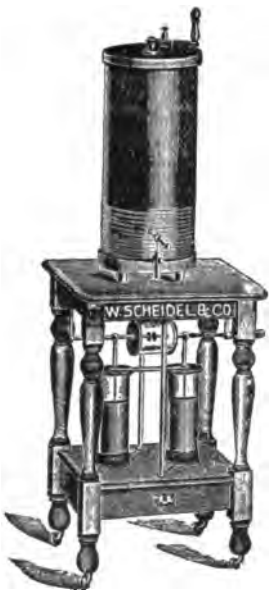


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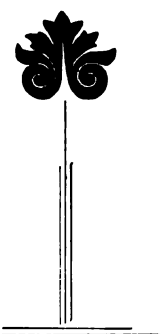


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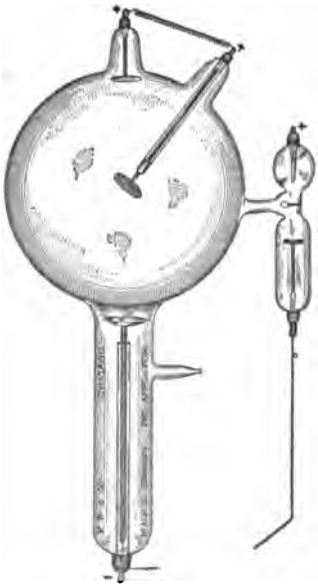

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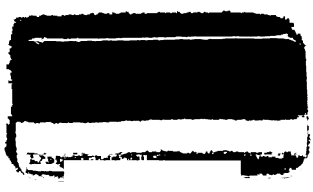

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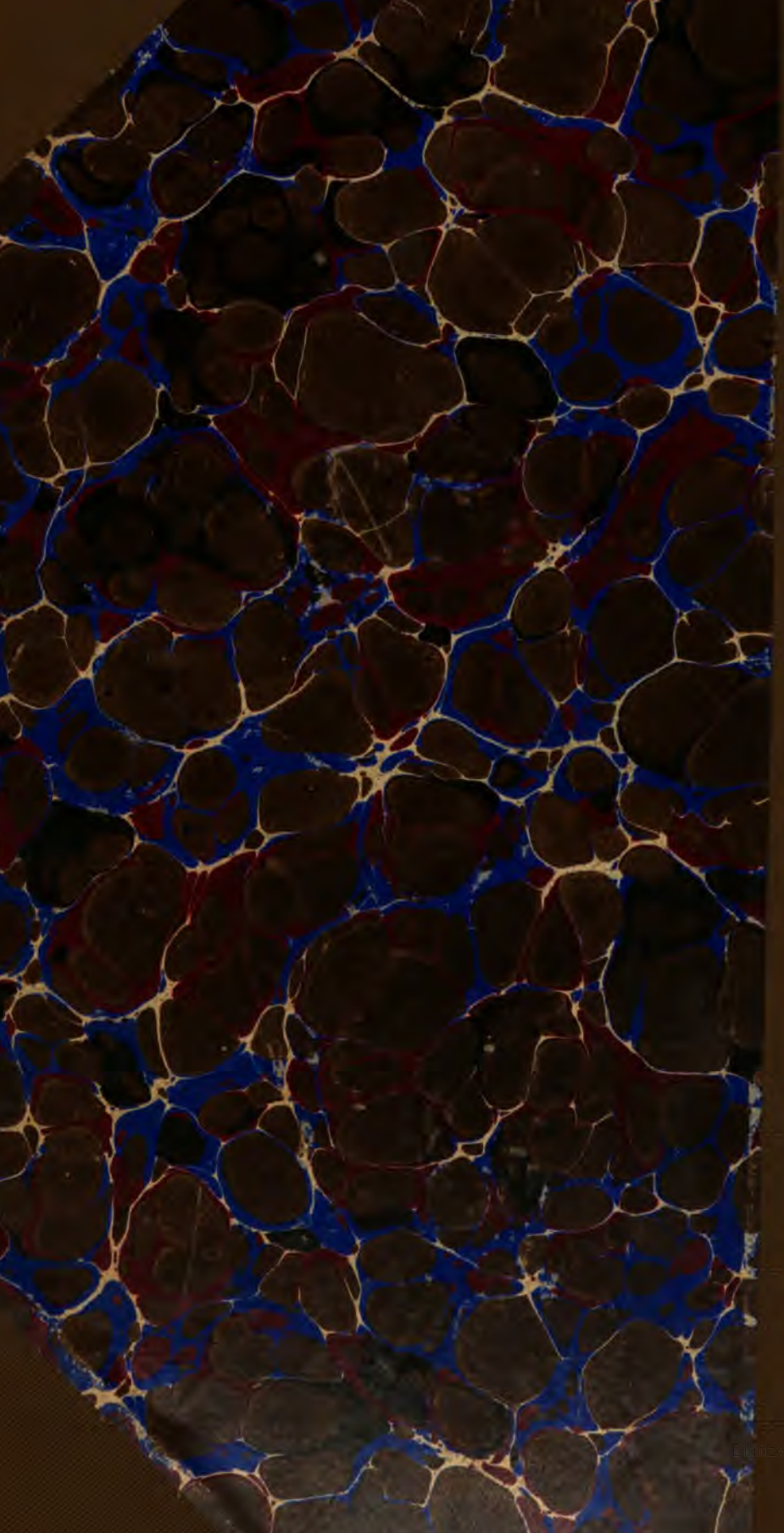
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